



Enhanced PLC-5 Programmable Controllers Series E, Revision E.2

(Cat. No. 1785-L11B, -L20B, -L26B, -L30B, -L40B, -L40L, -L46B, -L60B, -L60L, -L80B, -L86B)

Purpose of this Document

Use these release notes to understand the enhancements to the Series E, Revision E.2 release of Enhanced PLC-5[®] processors:

Common PLC-5 Processor Enhancements

This release includes this enhancement for Ethernet Channel diagnostics - channel 3A when using a **Series B, Revision B or later** Ethernet sidecar module:

- 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.

- Series C, revision H and later processors limit the amount of messages they will accept under extremely high levels of Ethernet traffic (storms). This is designed to prevent a major fault with memory loss.

To complement this enhancement, Series E, revision E.1 processors include diagnostics with a network storm counter (word 44 of Ethernet diagnostic file). At the beginning of each storm, the network storm counter is incremented once independent of the length of the storm.

For example, when the processor receives more than 16 Ethernet frames within 10ms, it goes into storm mode and increments the network storm counter. In this mode, the processor disables receive interrupts for 6ms. After 6ms, the processor enables the input interrupts, and sets the input limit to 8 frames in 10ms. After 10ms (and without the input limit being exceeded), the processor returns the input limit to 16 frames.

Allen-Bradley Replacements

During certain times (such as when the processor encounters mode changes), the input limit is further reduced to 5 frames for 10ms and interrupts are disabled for 10ms.

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 50 words.

Series E, Revisions E, E.1 and E.2 Processors Only

This release includes this enhancement in Series E, Revisions E, E.1 and E.2 Enhanced PLC-5 processors only:

- supports use of the 1785-RC Relay Cartridge

The relay cartridge serves as an interface from the PLC-5 to a user-supplied external device such as the Allen-Bradley 700P relay. When the PLC-5 is in run mode, it monitors online ladder program edits and I/O forcing activity. When either of these is detected, the processor opens the relay on the relay cartridge for one second.

PLC-5, RSLinx, RSLogix, and RSNetworx are trademarks of Rockwell Automation. ControlNet is a trademark of ControlNet International, Limited. Ethernet is a registered trademark of DEC, Intel, and Xerox Corporation.

Reach us now at www.rockwellautomation.com

Wherever you need us, Rockwell Automation brings together leading brands in industrial automation including Allen-Bradley controls, Reliance Electric power transmission products, Dodge mechanical power transmission components, and Rockwell Software. Rockwell Automation's unique, flexible approach to helping customers achieve a competitive advantage is supported by thousands of authorized partners, distributors and system integrators around the world.



Americas Headquarters, 1201 South Second Street, Milwaukee, WI 53204, USA, Tel: (1) 414 382-2000, Fax: (1) 414 382-4444
European Headquarters SA/NV, avenue Herrmann Debroux, 46, 1160 Brussels, Belgium, Tel: (32) 2 663 06 00, Fax: (32) 2 663 06 40
Asia Pacific Headquarters, 27/F Citicorp Centre, 18 Whitfield Road, Causeway Bay, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

**Rockwell
Automation**