



ControlNet PLC-5 Programmable Controllers Series F, Revision C.3

(Cat. Nos. 1785-L20C15, -L40C15, -L46C15, -L80C15)

Introduction

Use these release notes with the following releases of ControlNet PLC-5[®] processors:

Catalog Number	Series F
1785-L20C15	Rev. C.3
1785-L40C15	Rev. C.3
1785-L46C15	Rev. C.3
1785-L80C15	Rev. C.3

What This Document Describes

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Before You Begin

IMPORTANT

ControlNet PLC-5 programmable controllers in a hot backup system must have compatible firmware revisions. Refer to the table in the following section to determine compatibility.

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Firmware Compatibility and Maintenance Requirements



For General Applications

If your version of RSNetworkx does not recognize a newer ControlNet PLC-5, you may need to update your RSNetworkx software or the Electronic Data Sheet for the PLC-5. To update your EDS file, use the Hot Backup CD that was shipped with your PLC-5 processor. If you don't have the CD, contact Rockwell Automation Technical Support at 440-646-5800 to update your EDS files.

For Backup Applications

This Series, Revision of Firmware:	Is only compatible with:
Series F/Revisions C, C.1, C.2 and C.3	Series F/Revisions C, C.1, C.2 and C.3
Series F/Revisions B and B.1	Series F/Revisions B and B.1
Series F/Revisions A, A.1, A.2 and A.3	Series F/Revisions A, A.1, A.2 and A.3

Be sure that all **spare** ControlNet PLC-5 hot backup processors contain compatible firmware.

Software Requirements

Use the following table to understand specific features that are only available with specific versions and releases of software:

If you want this feature:	You need both of these versions of software:	
	RSLogix5	RSNetworkx:
Standard functionality	2.2 or later	1.8 or later
Hot Backup (1771 and Flex I/O)	3.21 or later	1.8 or later
Multicast Outputs	3.21 or later	3.0 or later
SLC I/O (also with Hot Backup)	5.0 or later	3.0 or later

Download or Order a User Manual

You can download an electronic version or order a printed copy of the ControlNet PLC-5 Programmable Controllers User Manual, publication 1785-UM022B-EN-P:

- download a free electronic version from the internet at: **www.ab.com/manuals** or **www.theautomationbookstore.com**
- order a printed manual by:
 - contacting your local distributor or Rockwell Automation representative
 - visiting **www.theautomationbookstore.com** to place your order
 - calling 1.800.963.9548 (USA/Canada) or 001.330.725.1574 (outside USA/Canada)

ControlNet PLC-5 Enhancement Series F, Revision C.3

The following table describes the enhancement in this release of ControlNet PLC-5 processors.

Enhancement:	Description:
Enhanced diagnostics	Additional diagnostic information is saved when a fault with memory loss occurs.

Updated Timeout Switchover Formula for Hot Backup Applications Series F, Revision C.3

Timeout Switchover is when the secondary processor loses communication with the primary processor for a certain length of time, it times out the primary processor and then performs a switchover. The following events can cause a Timeout Switchover:

- Primary PLC-5 system failure.
- Loss of power to the primary PLC-5 system
- Problems with the ControlNet network which causes loss of the handshake connection with the primary processor.

The following formula determines the length of time the secondary system waits before timing out the primary processor:

$$\text{Primary Timeout} = (3 \times \text{NUT}) \text{ or } 20\text{ms, whichever is greater} + 10\text{ms} + 1\text{ms for every } 8 \text{ scheduled connections.}$$

For example: If the NUT is 5ms with 20 scheduled connections, the Primary Timeout is $20 + 10 + 2$ or 32ms. If the NUT is 10ms with 80 scheduled connections, the Primary Timeout is $30 + 10 + 10$ or 50ms.

The Primary Timeout is not the only factor in the Timeout Switchover Time. There is also processing which must occur on the secondary system after a Primary Timeout occurs. This processing can take up to 5ms. The formula for the Timeout Switchover Time is:

$$\text{Timeout Switchover Time} = \text{Primary Timeout} + 5\text{ms.}$$

So, if the NUT is 5ms with 20 scheduled connections, the Timeout Switchover Time is equal to 32ms plus 5ms, or 37ms.

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Known Anomaly

The following is a known anomaly that has **not** been corrected in any series of PLC-5/80C processors:

Under certain network configurations, the PLC-5/80C will only support 127 (out of a possible 128) I/O Map Table Entries. The processor may fault with memory loss when all 128 I/O Map Table Entry connections are established.

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