Release Notes

ControlLogix DeviceNet Interface Module

Use These Release Notes

These release notes describe changes in firmware revision 4.002 and earlier of the ControlLogix DeviceNet Interface Module, catalog number 1756-DNB, Series A.

Use these notes along with your ControlLogix DeviceNet™ Interface Module User Manual, publication 1756-6.5.19, May 2000.

New Features

New to Revision 4.001

- The use of this release of the 1756-DNB requires you to add a new electronic data sheet (EDS) file to RSLinx and RSNetWorx for DeviceNet to allow this 1756-DNB version to be recognized by the software. You can download the new EDS file from the following URL: http://www.ab.com/networks/eds/.
- AutoConfig feature - a scanner can automatically map a network of slave devices into its scanlist without the use of RSNetWorx for DeviceNet. For more information on how to use this feature, refer to the Technical Support Knowledgebase at the following URL: http://support.rockwellautomation.com/ or contact Technical Support at 440.646.5800.

- Quick Connect feature - a reconnected slave node on a DeviceNet network can quickly go into operation by shortening the time required to make the logical connection between it and the scanner. For more information on how to use this feature, refer to the Technical Support Knowledgebase at the following URL: http://support.rockwellautomation.com/ or contact Technical Support at 440.646.5800.
- The 1756-DNB now supports the ability to perform electronic keying down to the major and minor revision level of a slave device.

New to Revision 3.007

- Offlink Connection support – RSLinx and RSNetWorx for DeviceNet can now configure the 1734-ADN point I/O bus from other CIP-based networks using this version of the DNB firmware. With this version of the 1756-DNB, you can use Ethernet or ControlNet to connect to the 1756-DNB and then 'bridge' through the 1756-DNB and 1734-ADN to communicate on the Point I/O bus. Without offlink connection support, you would have to physically connect to the local DeviceNet network that the 1734-ADN is on to configure modules on the Point I/O bus.
- We removed the 'Build Identification Number' from the product name string of the DNB module. This does not affect the functionality of the product.

- We modified the behavior of the module LEDs to be compliant with ODVA specification. See this table for the updated list:

	MOD/NET LED	I/O LED
Flashing Green	• No scanlist present • no connections established or timed out	DNB in IDLE mode
Solid Green	• Scanlist downloaded • At least one connection established, none timed out	DNB in RUN mode
Flashing Red	• Minor recoverable fault (check Node Status Table) • No network power	N/A
Solid Red	• Unrecoverable fault • Bus Off error • Duplicate MACID	• Unrecoverable fault • Scanner halted
Off	• No device power • Module not online	• No network power • No device power • Module not on

New to Revision 3.005

A “Build Identification Number” has been added to the display sequence of the DNB module. This number will be displayed along with the firmware version of the module on boot up. The number will take the form of the letter “Q” along with a numeric value. It is used for internal quality auditing purposes and does not in any way affect the functionality of the product.

Corrected Anomalies

This section describes anomalies corrected in recent firmware revisions.

Anomalies Corrected in Revision 4.002:

The 1756-DNB firmware version 4.002 corrects an anomaly found only in version 4.001.

- A timing window existed in version 4.001 when it was executing its startup code. If this anomaly occured, an 'ERC 4:2,0,0,0' error was shown on the front display of the DNB while it was in the process of powering up.

Anomalies Corrected in Revision 4.001

- If a group-2-only slave device dropped an explicit message, the 1756-DNB would no longer be seen in the backplane during an RSLinx or RSNetWorx browse.
- If an OPC/DDE client sent a bad explicit message, the 1756-DNB would no longer be seen in the backplane during an RSLinx or RSNetWorx browse.
- The 1756-DNB would send a bad explicit message if the explicit message size was greater than 250 bytes. This size can be configured on CIP-style message instructions in RSLogix 5000.

Anomalies Corrected in Revision 3.010

If a slave device dropped an explicit message during the slave initialization process performed by the scanner, the 1756-DNB would fail with an ERC 4:6 error code.

Anomalies Corrected in Revision 3.009

- If a DNB is powered up simultaneously with another DeviceNet device with the same node address, **both** nodes would go into 'Duplicate Node Detected' mode.
- If an explicit message was sent to the DNB through the backplane, commanding it to change its MAC address, the DNB would fault with an 'ERC Error: -- 4:2,0,0,0'.

Anomalies Corrected in Revision 3.008

- If a user changes a slave device's Transmit or Receive size in the scanner's scanlist without changing the slave's corresponding Transmit or Receive size, **and** the I/O connection between the scanner and the slave device is maintained during the process, the scanner will not indicate an I/O data size mismatch error (ERROR code 77) when put back into RUN mode.

IMPORTANT The input data to the controller will **not** be updated during this condition.

For example, the user modifies the scanner's scanlist by changing the slave device's Receive size without changing the slave's corresponding Transmit size, then places the scanner back into RUN mode. Inputs in the controller will not be updated and no error will be reported. Outputs will continue to be sent out.

- If the scanner module could not establish an I/O connection to a slave device due to configuration problems, further Explicit Messages to that device would not be sent by the scanner. When this occurs, the following conditions may take place:
  - The scanner module would "disappear" from the backplane in an RSLinx browse window.

– The slave device in question would not show up in an RSLinx browse window or missing in a subsequent browse.
– The scanner module would not attempt to reestablish a connection to that slave device once the scanner got into this state (until the scanner is reset or the DeviceNet cable is disconnected and reconnected).

Anomalies Corrected in Revision 3.007

The 1756-DNB would stop communicating to RSLinx or stop responding to ladder messages if you did not have the DeviceNet port connected and supplied with network power.

Anomalies Corrected in Revision 3.005

- When the DNB module input size was set for 20 DINTs **and** output size was set for 19 or fewer DINTs, the RUN/IDLE bit would be overwritten by random data causing the module to change mode unexpectedly. This anomaly applies to versions 3.003 and 3.004.
- This version corrected the "Watchdog Timer" error that sometimes occurred during firmware upgrades. Once upgraded to version 3.005, flash upgrades will no longer require two steps. *Please note that upgrades for previous versions of the 1756-DNB may still require two steps. See the README file in the upgrade kit for more information.*
- If a DeviceNet node was using fragmented I/O messages and did not finish its response before the DNB module started another scan cycle, the output data from the controller was being mapped to the controller's input data table.

Known Anomalies

When Flash upgrading a 1756-DNB from versions prior to 3.005, it is possible that the module will require a two-flash operation. Please see the associated readme.txt (included with the Firmware upgrade kit) for more information on how to flash upgrade a 1756-DNB module.

www.rockwellautomation.com

Corporate Headquarters
Rockwell Automation, 777 East Wisconsin Avenue, Suite 1400, Milwaukee, WI, 53202-5302 USA, Tel: (1) 414.212.5200, Fax: (1) 414.212.5201

Headquarters for Allen-Bradley Products, Rockwell Software Products and Global Manufacturing Solutions
Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444
Europe/Middle East/Africa: Rockwell Automation SA/NV, Vorstlaan/Boulevard du Souverain 36, 1170 Brussels, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640
Asia Pacific: Rockwell Automation, 27/F Citicorp Centre, 18 Whitfield Road, Causeway Bay, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

Headquarters for Dodge and Reliance Electric Products
Americas: Rockwell Automation, 6040 Ponders Court, Greenville, SC 29615-4617 USA, Tel: (1) 864.297.4800, Fax: (1) 864.281.2433
Europe/Middle East/Africa: Rockwell Automation, Brühlstraße 22, D-74834 Elztal-Dallau, Germany, Tel: (49) 6261 9410, Fax: (49) 6261 17741
Asia Pacific: Rockwell Automation, 55 Newton Road, #11-01/02 Revenue House, Singapore 307987, Tel: (65) 6356-9077, Fax: (65) 6356-9011

Publication 1756-RN567G-EN-P - February 2003 PN 957782-35

Supersedes Publication 1756-RN567F-EN-P - January 2003