

DEVICENET + RS LOGIX

How to add an Inline or Fieldline Modular bus coupler for DeviceNet™ to a CompactLogix control program

Application note

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1 Introduction

This document describes how to create an RSLogix 5000 Control program with one of the following bus couplers as part of the I/O configuration.

Products

Description	Type	Order No.	Pcs. / Pkt.
DeviceNet™ bus coupler, 8 inputs, 24 V DC, 4 outputs, 24 V DC, 500 mA, complete with I/O connectors	IL DN BK DI8 DO4 2TX-PAC	2897211	1
DeviceNet™ bus coupler, 24 V DC, complete with accessories (connector and labeling field)	IL DN BK3-PAC	2718785	1
Fieldline Modular M12 bus coupler, DeviceNet™ M12, inputs: 24 V DC	FLM BK DN M12 DI 8 M12	2736343	1



The following describes how an IL DN BK DI8 DO4 2TX-PAC bus coupler is added. Installation of other bus couplers is very similar. Exceptions will be described in this document.

It is assumed that the user has the latest licensed versions of Rockwell RSLinx, RSNetworx for Ethernet/IP and RSLogix 5000.



Make sure you always use the latest documentation. It can be downloaded at www.phoenixcontact.net/catalog.

2 Adding an IL DN BK DI8 DO4 2TX-PAC

The following will describe the necessary steps to insert the IL DN BK DI8 DO4 2TX-PAC (short: IL DN BK) into your RSLogix control program. It is assumed that a DeviceNet™ scanner is part of the existing PLC configuration.

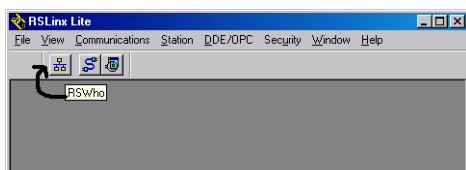
Make all physical DeviceNet™ connections. This application will run the DeviceNet™ at 500k baud with the scanner MAC address set to 0, and the IL DN BK to MAC address 3.

2.1 RSLinx configuration

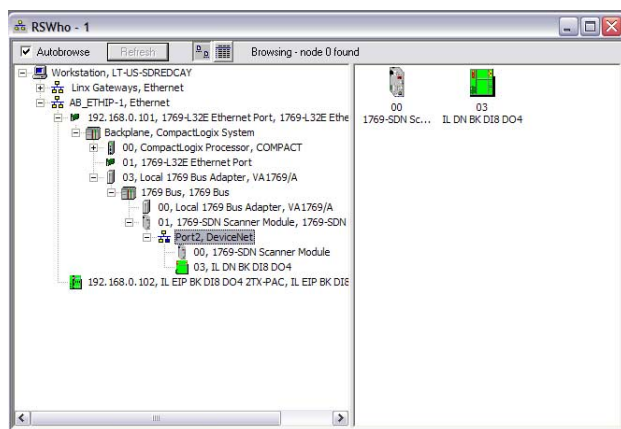
The RSLinx software again will be used to link the DeviceNet™ network to the RSNetworx Windows software.



1. Open RSLinx by clicking its icon on the toolbar.



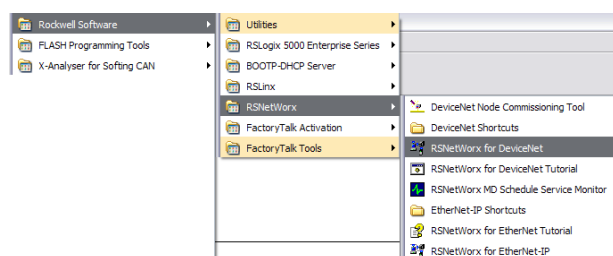
2. Click the RSWho icon in the main window of RSLinx.



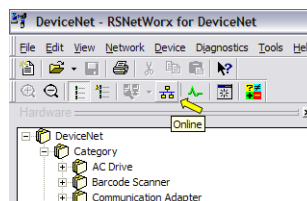
3. Expand the “AB_ETHIP-1 Ethernet” driver until the 1769-SDN scanner module and the IL DN BK are visible below the DeviceNet™ network. This confirms that DeviceNet™ devices are being addressed and are communicating.
4. Close RSLinx and continue. Closing RSLinx will just minimize the program, it is still running and may be accessed at any time by clicking its icon in the desktop’s system tray (lower right-hand corner on desktop screen under Windows).

2.2 RSNetWorx for DeviceNet™

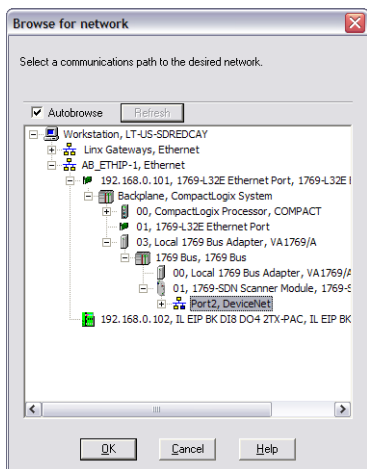
RSNetWorx for DeviceNet™ software configures and monitors devices connected to DeviceNet™ networks.



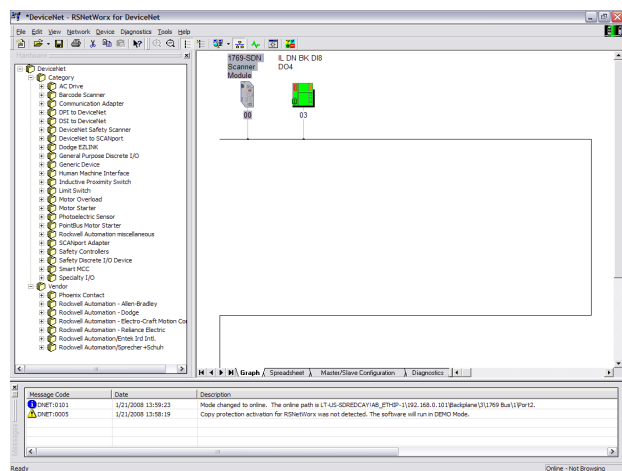
1. Open RSNetWorx for DeviceNet™ from “Start... All Programs... Rockwell Software... RSNetWorx... RSNetWorx for DeviceNet™”.



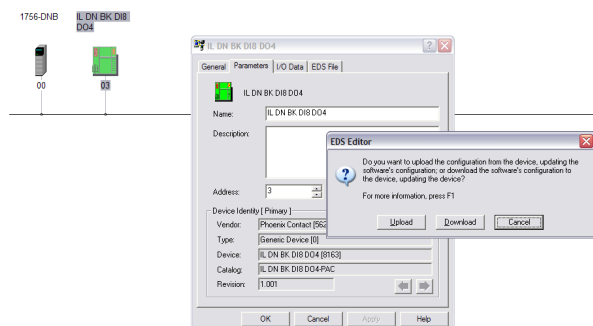
2. RSNetWorx will open with a blank network, click the RSWho button to open the network browser.



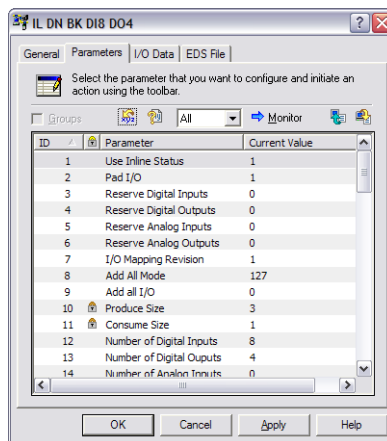
- Expand the AB_ETHIP-1 driver until the DeviceNet™ network is available and the OK button is enabled. Then click OK.



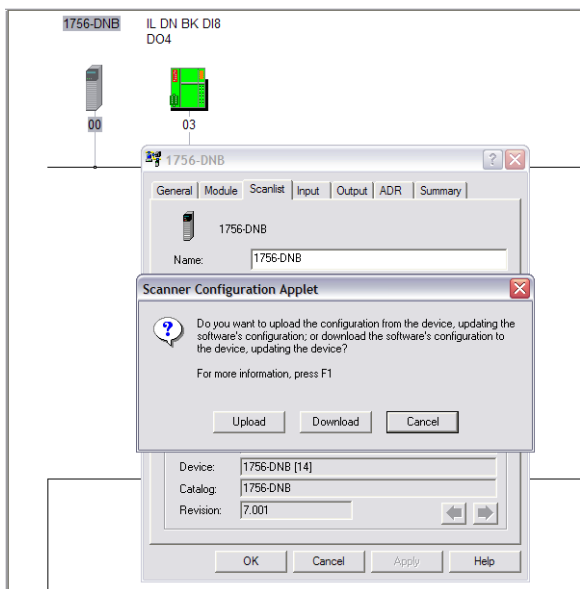
- When the 1769 SDN scanner and the IL DN BK are shown on the network, click the “Cancel” button to stop browsing for devices.



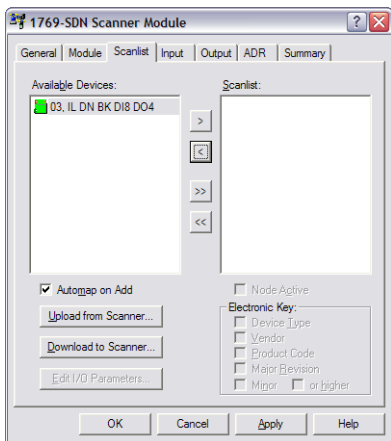
- Double click the IL DN BK icon to open the parameter window.
- Select the “Parameters” tab, and then click “Upload”.



- The EDS file parameters will be displayed. Pay attention to the produced and consumed sizes. This information will be needed to add the IL DN BK to the 1769 scan list.
- Close the IL DN BK properties window.



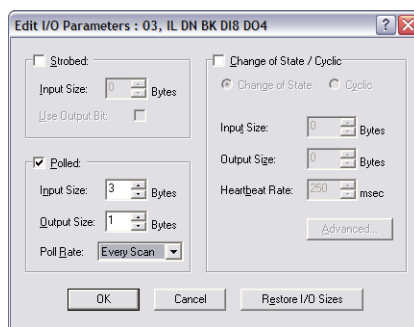
9. Double click the 1769-SDN icon to open the properties window.
10. Select the "Scanlist" tab and then click "Upload".



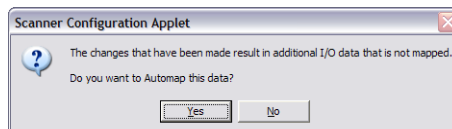
11. The 1769-SDN scan list will open. At this point the scan list (left field) is empty.
12. Select the IL DN BK under "Available Devices" and add it to the scan list by clicking the ">" button.



13. A warning will appear. Click OK. The IL DN BK will now be in the "Scanlist" field.
14. Click the "Edit I/O Parameters" button to open the editor for the IL DN BK.



15. Enter the input size and the output size received from the EDS file in the previous steps. This application the IL DN BK is operating stand-alone and the input size is 3 bytes and the output size is 1 byte.
16. Click the OK button to close the editor.

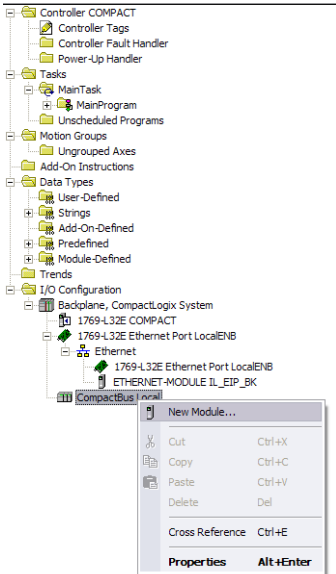


17. Two separate warning windows will open. Click "Yes" in both windows.
18. Click OK in the "1769 SDN Properties" window and download the scan list to the PLC scanner.

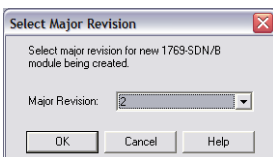
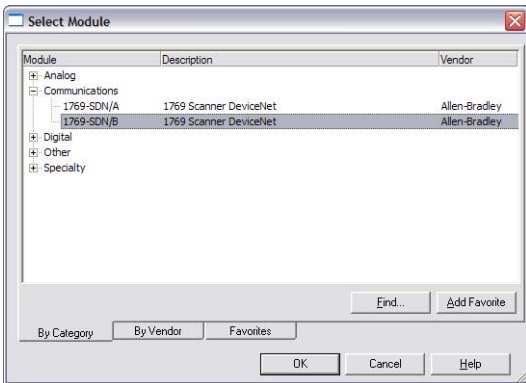
The DeviceNet™ scanner should now be polling the IL DN BK at a default of 10 ms.

2.3 RSLogix

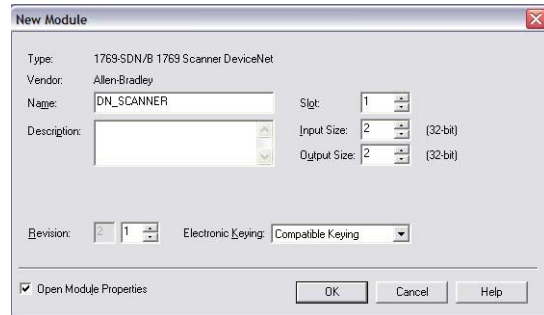
The 1769 SDN DeviceNet™ scanner can now be added to the CompactLogix program.



1. Right click the “Compact Bus Local” icon in the I/O configuration and select “New Module”.
2. The “Select Module” window will open. Select the appropriate scanner module for the communications group. In this application the scanner is 1769-SDN/B.

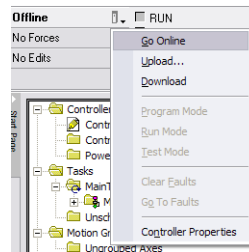


3. Enter the correct revision number of the scanner module. In this application the major revision is 2.



4. The “New Module“ window will open. Enter a name for the scanner. The input and output sizes should equal the total input and output data for the overall DeviceNet™ network. In this application enter 2 for the input and output sizes.
5. Click OK to close the “New Module“ window.

The 1769-SDN scanner is now part of the RSLogix project, and the project can be downloaded to the PLC.



6. From the PLC access tool select “Download” and download the project to the PLC.
7. The scanner is now part of in the project running on the PLC and the IL DN BK data can be accessed via the controller tags.



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