Quick Start

Allen-Bradley

Logix5000 Control Systems: Connect POINT I/O Modules over a DeviceNet Network

Catalog Numbers Logix5000 Controllers, 1734 POINT I/O Modules

Important User Information

Solid-state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls (publication SGI-1.1 available from your local Rockwell Automation sales office or online at http://www.rockwellautomation.com/literature/) describes some important differences between solid-state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid-state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

	**WARNING:** Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.
	**ATTENTION:** Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence.
	**SHOCK HAZARD:** Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.
	**BURN HAZARD:** Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.
IMPORTANT	Identifies information that is critical for successful application and understanding of the product.

Notes:

About This Publication

This quick start provides examples and procedures for including POINT I/O™ modules in a Logix5000™ controllers control system over a DeviceNet network. The programming examples are not complex, and offer easy solutions to verify that devices are functioning and communicating properly.

IMPORTANT	This publication describes **example tasks** you complete when using POINT I/O modules on a DeviceNet network. The tasks described are **not** the only tasks you can complete with the POINT I/O modules on a DeviceNet network. You will likely need to complete additional tasks when using POINT I/O modules in a specific Logix5000 control system.

Before Using This Publication

You can only complete the tasks described in this publication after first completing some prerequisite tasks with a Logix5000 controller. For example, before you can add a POINT I/O module to an RSLogix™ 5000 project, as described in Chapter 3, you must first create the project.

IMPORTANT	Multiple Logix5000 controllers support the use of a DeviceNet network. The specific hardware used and software configuration parameter settings vary by Logix5000 controller. This quick starts describes using POINT I/O modules over a DeviceNet network in a CompactLogix™ 5370 L3 control system. The example graphics shown in Table 1 - Required Tasks To Complete Before Using this Quick Start on page 6 are for CompactLogix 5370 L3 controllers. Depending on the Logix5000 controller you are using, the specific steps to complete the tasks described in the table might vary. The tasks described in this publication are written with the assumption that you have already installed the CompactLogix 5370 L3 control system and it is powered.

For more information on how to complete these tasks with specific Logix5000 controllers, see the Integrated Architecture™: Logix5000 Control Systems Quick Starts Quick Reference, publication IASIMP-QR024.

This table describes the tasks you must complete before using this publication.

Table 1 - Required Tasks To Complete Before Using this Quick Start

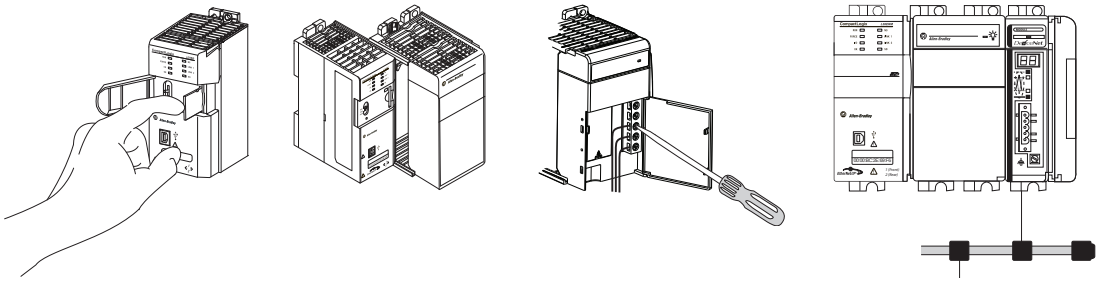
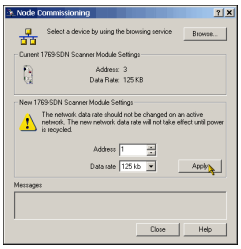
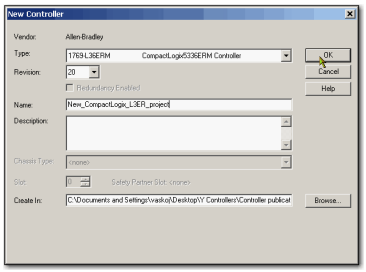
Task	Description
Prepare the Logix5000 control system hardware	Assembling the control system and connecting to the DeviceNet network. At minimum, your system must include a controller, DeviceNet scanner module to access the DeviceNet network and the components required to install a DeviceNet network. For example, you need an external power source to power a DeviceNet network.  For example purposes, this quick start uses a CompactLogix 5370 L3 controller with a 1769-SDN scanner module as shown above, and the tasks described in Chapter 2 and Chapter 3 are done so with that controller and scanner module. We recommend that you use those components with this quick start.If you use a different Logix5000 controller and DeviceNet scanner module, you can complete the tasks in these chapters but you must account for any hardware differences. For more information on installing a DeviceNet network, see the DeviceNet Media Design and Installation Guide, publication DNET-UM072. This task **does not** include installation of **remote** hardware components, for example, POINT I/O modules, used over the network included in your application.
Prepare the computer	Installing required software, for example RSLogix 5000 software, on your complete  

Table 1 - Required Tasks To Complete Before Using this Quick Start

Task	Description
Configure the network	Complete tasks associated with configuring the DeviceNet network with RSNetWorx™ for DeviceNet software, such setting the node address for the DeviceNet scanner module your controller uses to access the DeviceNet network.  This quick start uses a CompactLogix 5370 L3 controller with a 1769-SDN scanner module, and the tasks described in Chapter 2 and Chapter 3 are done so with that controller and scanner module. We recommend that you use those components and corresponding software files with this quick start. If you use a different Logix5000 controller and DeviceNet scanner module and corresponding DeviceNet network software files, you can complete the tasks in Chapter 2 and Chapter 3 but you must account for any software differences.
Create an RSLogix 5000 project	Project used with your Logix5000 controller that includes all required control system components. Your project must include the DeviceNet scanner module used by your controller to access the DeviceNet network. This quick start uses a CompactLogix 5370 L3 controller with a 1769-SDN scanner module, and the tasks described in Chapter 2 and Chapter 3 are done so for that controller and scanner module. We recommend that you use those components with this quick start. If you use a different Logix5000 controller and DeviceNet scanner module and corresponding RSLogix 5000 software files, you can complete the tasks in Chapter 2 and Chapter 3 but you must account for any software differences. 

Other Logix5000 Control System Quick Starts

This quick start describes how to use a single component-type over a single network in a Logix5000 control system. Typically, though, a Logix5000 control system includes more than the controller, communication module and a single component over a single network.

For example, if a Logix5000 control system operates on a DeviceNet network, the system might use remote I/O modules, HMI devices and drives in addition to the controller and communication modules.

For a complete list of Logix5000 control system quick starts that describe how to other devices in Logix5000 control systems, see the Integrated Architecture:Logix 5000 Control Systems Quick Starts Quick Reference, publication IASIMP-QR024.

The beginning of each chapter contains the following information. You should read these sections before beginning work in each chapter:

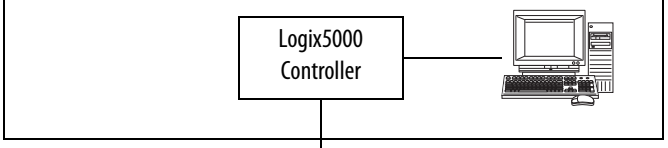
- **Before You Begin** - This section lists the tasks you must complete before starting the chapter.
- **What You Need** - This section lists the tools that are required to complete the tasks in the current chapter. This includes, but is not limited to, hardware and software.
- **Follow These Steps** - This section illustrates the steps in the current chapter.

Where to Start

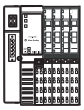
Required Tasks

Described in the appropriate Logix5000 controller quick start

1. Prepare the Controller Hardware
2. Prepare the Computer
3. Configure the Network
4. Create RSNetWorx for DeviceNet and RSLogix 5000 Software Projects

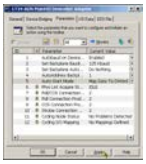


Prepare the Distributed POINT I/O Hardware



page 13

Create DeviceNet Network Software Files



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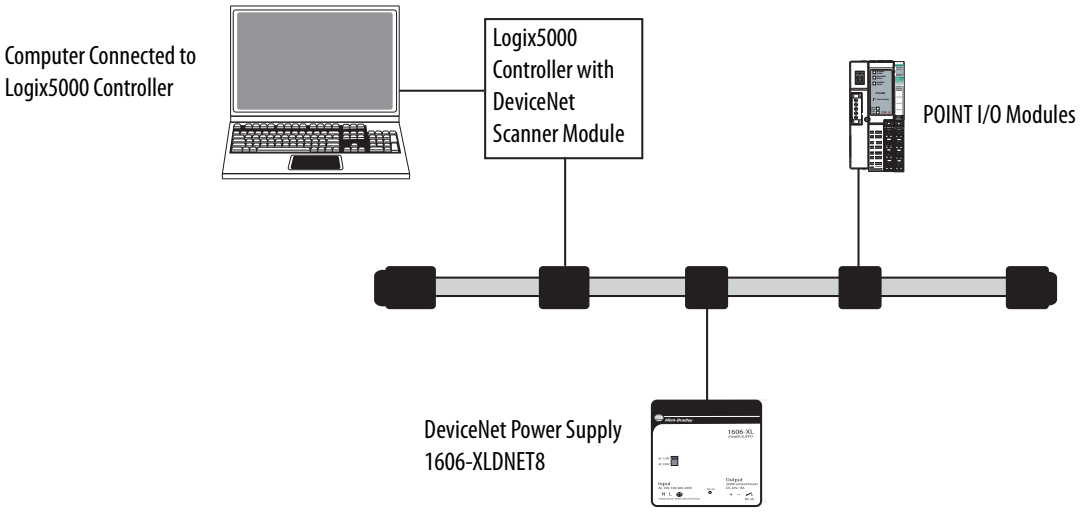
Use the POINT I/O Adapter and Output Module in an RSLogix 5000 Project

page 47

How Hardware is Connected

This quick start demonstrates the following Logix5000 control system using POINT I/O modules on a DeviceNet network.



Required Software

To complete examples in this quick start, you need this software.

Software	Required Software Version, Min.	Required for this Task
RSLogix 5000	20.00.00 or later(1)	Change RSLogix 5000 projects to use POINT I/O modules.
RSNetWorx™ for DeviceNet	11.00.00	Modify DeviceNet configuration file to include the POINT I/O modules described in this publication.
DeviceNet Tag Generator	20.00.00 or later	Generate new programs and tags in your RSLogix 5000 project.

(1) RSLogix 5000 software, version 20.00.00 or later is required for use of this quick start because the example Logix5000 controller, and associated tasks, described herein are completed in a CompactLogix 5370 L3 control system. CompactLogix 5370 control systems require RSLogix 5000 software, version 20.00.00 or later. If you connect a 1734 POINT I/O module over a DeviceNet network in a Logix5000 control system that uses a different controller, the minimum software version may differ.

Parts List

You need these parts to use this publication.

✓	Quantity	Cat. No.	Description
	1	1734-ADN	POINT I/O DeviceNet adapter
	1	1734-OB4E	POINT I/O protected output module
	1	1734-TB	POINT I/O mounting base assembly with base and removable terminal block
	1	1734-RTB	POINT I/O removable terminal block
	1		POINT I/O end cap
	1	1794-PS3	FLEX™ FLEX I/O 85…264V AC to 24V DC 3 A power supply (1794-PS3)
	1	1485K-P1F5-R5	KwikLink right-angle micro male to micro female connector cable
	1	1485P-P1E4-R5	KwikLink sealed micro connector
	1	1799-DNC5MMS	5-pin linear to micro male adapter

Additional Resources

Use the additional resources listed in this table for more information when using POINT I/O modules over a DeviceNet network in a Logix5000 controller project.

Resource	Description
POINT I/O DeviceNet Adapter Installation Instructions, publication 1734-IN026	Describes the installation of the adapter and technical specifications.
POINT I/O DeviceNet Adapter User Manual, publication 1734-UM002	Describes the installation, configuration, and troubleshooting of your 1734-ADN module.
POINT I/O Protected Output Module, publication 1734-IN056	Provide details regarding installation of the 1734-OB4E module.
POINT I/O Sink Input Module Installation Instructions, publication 1734-IN051	Provide details regarding installation of the 1734-IB4 module.
POINT I/O Wiring Base Assembly Installation Instructions, publication 1734-IN013	Describes the installation of the 1734-TBS and 1734-TBS POINT I/O wiring base assemblies.
FLEX I/O DC Power Supply Installation Instructions, publication 1794-IN069	Provide details regarding installation of the 1794-PS and 1794-PS13 FLEX I/O power supplies.
DeviceNet Media Design and Installation Guide, publication DNET-UM072.	Describes how to install a DeviceNet network.
DeviceNet Modules in Logix5000 Control Systems, publication DNET-UM004	Describes the installation, configuration, and troubleshooting of DeviceNet modules.
Logix5000 Controllers Common Procedures Programming Manual, publication 1756-PM001	Provides details about adding and configuring modules, establishing communication, and writing ladder logic.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation® industrial system.
Product Certifications website, http://www.ab.com	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at http://www.rockwellautomation.com/literature/. To order paper copies of technical documentation, contact your local Allen-Bradley® distributor or Rockwell Automation or sales representative.

Prepare the Distributed POINT I/O Hardware

In this chapter, you learn how to complete the following tasks:

- Install the 1734-ADN DeviceNet adapter
- Install the 1734-OB4E digital output module
- Install the 1794-PS3 FLEX I/O power supply
- Connect power to the 1734-ADN DeviceNet adapter

Before You Begin

Before you begin, complete these tasks described in Before Using This Publication on page 5:

- Prepare the Logix5000 control system hardware - Verify the control system and DeviceNet network are powered before using this chapter.
- Prepare the computer
- Configure the network
- Create an RSLogix 5000 project

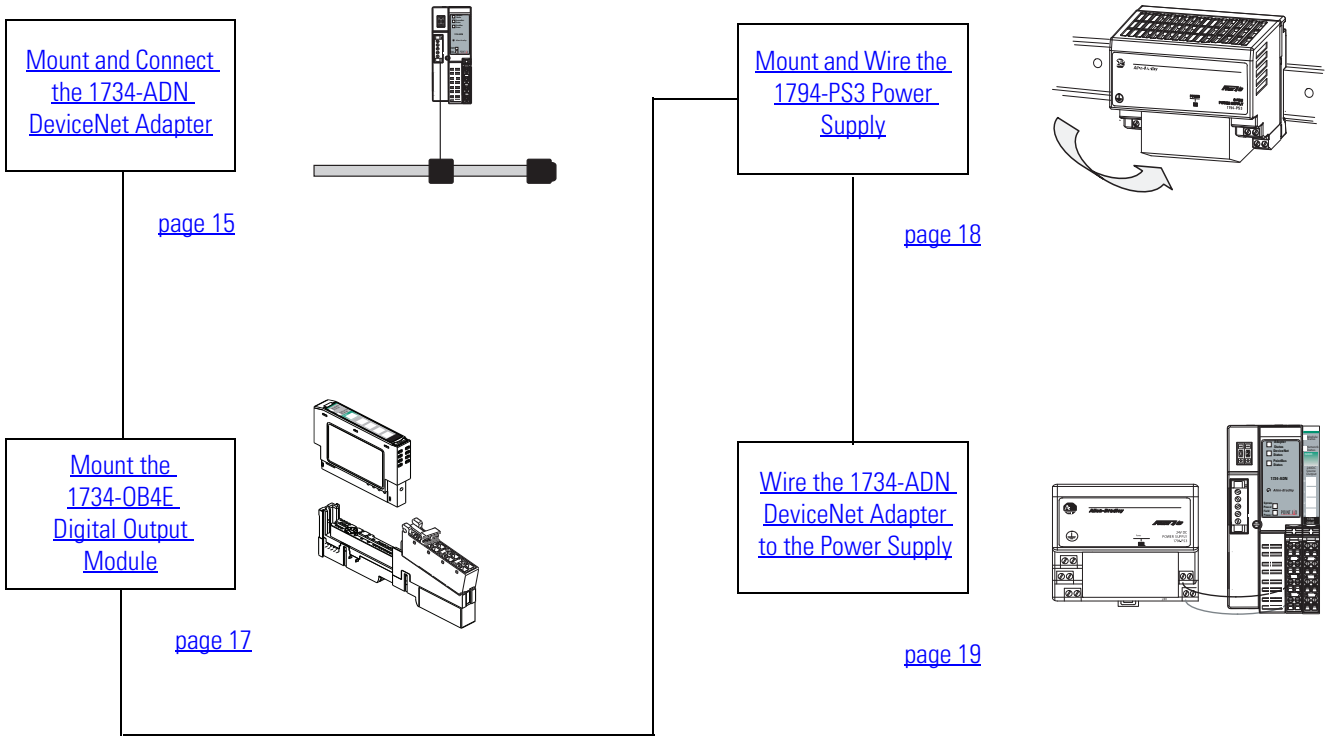
  The example RSLogix 5000 project used in this quick start uses a CompactLogix 5370 L3 controller.

What You Need

This table lists what products you need to complete the tasks described in this chapter.

✓	Quantity	Cat. No.	Description
	1	1734-ADN	POINT I/O DeviceNet adapter
	1	1734-OB4E	POINT I/O protected output module
	1	1734-TB	POINT I/O mounting base assembly with base and removable terminal block
	1	1734-RTB	POINT I/O removable terminal block
	1		POINT I/O end cap
	1	1794-PS3	FLEX™ FLEX I/O 85…264V AC to 24V DC 3 A power supply (1794-PS3)
	1	1485K-P1F5-R5	KwikLink right-angle micro male to micro female connector cable
	1	1485P-P1E4-R5	KwikLink sealed micro connector
	1	1799-DNC5MMS	5-pin linear to micro male adapter

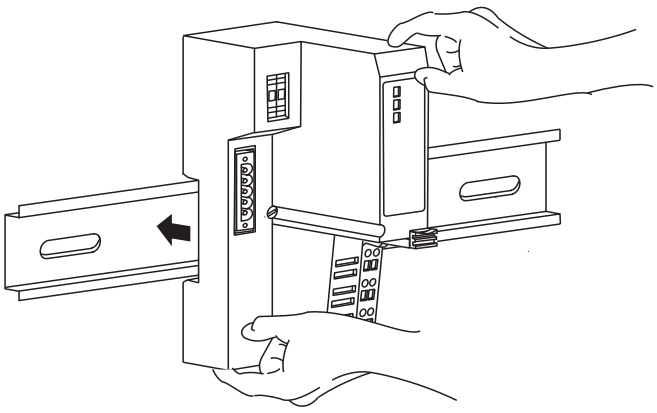
Follow These Steps



Mount and Connect the 1734-ADN DeviceNet Adapter

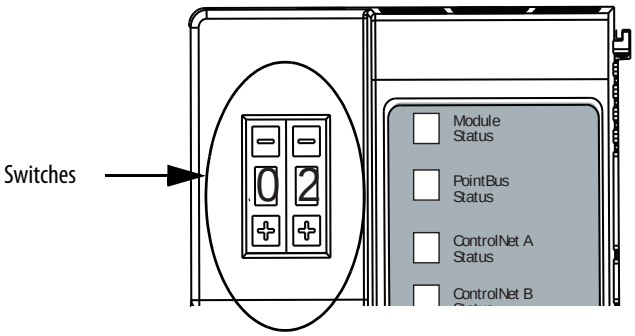
Complete the following tasks to mount and connect the 1734-ADN DeviceNet adapter.

1. Press the adapter onto the DIN rail.

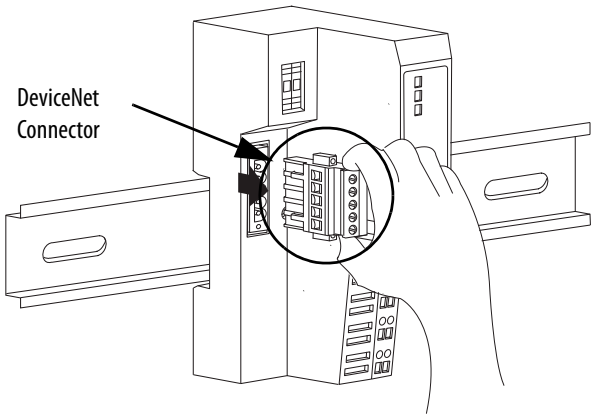


2. Set the network node address with the thumbwheel switch.

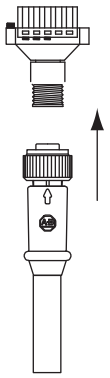
   This quick start uses node 02.



3. If the DeviceNet connector is installed on the 1734-ADN adapter module, remove it.

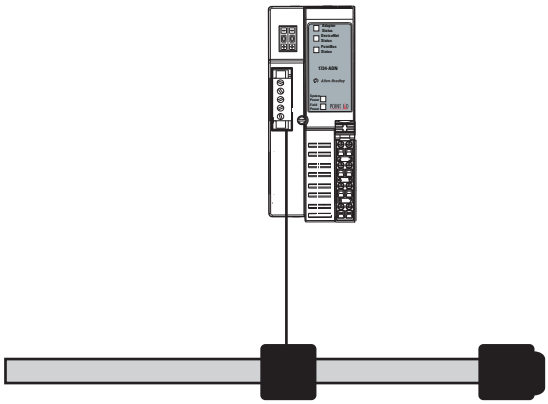


4. Connect the 1799-DNC5MMS 5-pin linear to micro male adapter to the female end of the 1485K-P1F5-R5 KwikLink right-angle micro male to micro female connector cable.



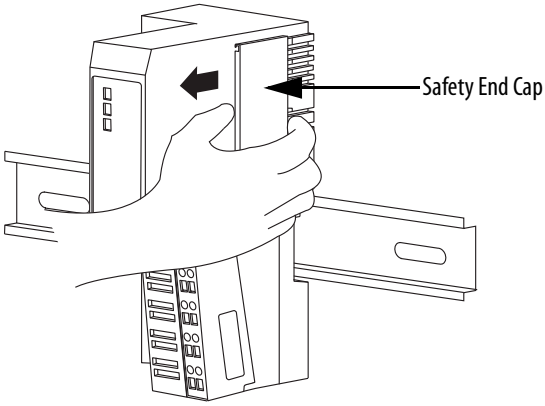
5. Connect the female end of the DeviceNet cable to the adapter.

6. Connect the other end of the cordset to the DeviceNet network.



7. Remove the safety end cap.

   This exposes the backplane and power interconnections.



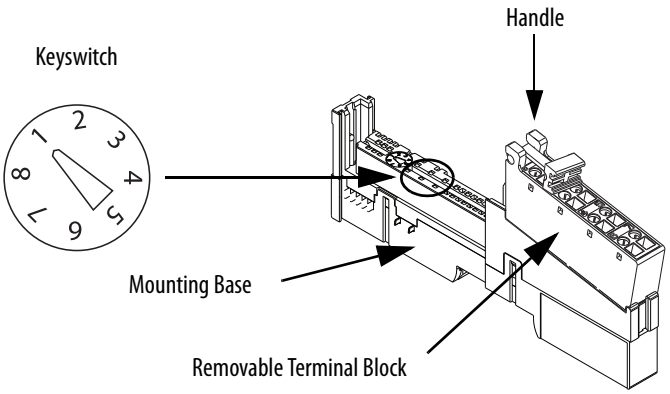
ATTENTION: Do not discard the end cap. Use this end cap to cover the exposed interconnections on the last mounting base on the DIN rail. Failure to do so could result in equipment damage or injury from electric shock.

Mount the 1734-OB4E Digital Output Module

1. Install the removable terminal base (RTB) on the mounting base; making sure the handle is in the down position.

2. Using a small screwdriver, rotate the keyswitch on the mounting base to match the position on the keyswitch on the 1734-OB4E module.

   This example shows the keyswitch in position 1.

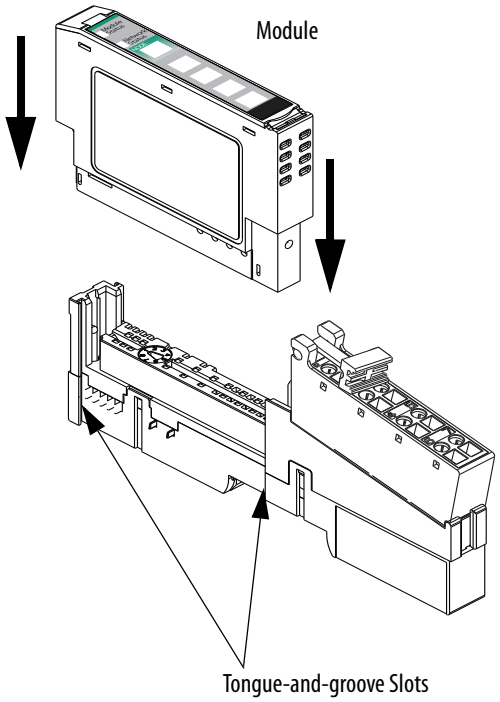


3. Press the 1734-OB4E module into the wiring base.

4. Snap the handle up to lock the RTB on the module.

5. Connect the wiring base assembly, including mounting base, module, and RTB, to the POINT I/O Ethernet adapter via the slots on the right side of the adapter.

6. Slide the wiring base assembly along the right side of the network adapter and press it onto the DIN rail.



7. Slide the safety end cap onto the right side of the 1734-OB4E module.

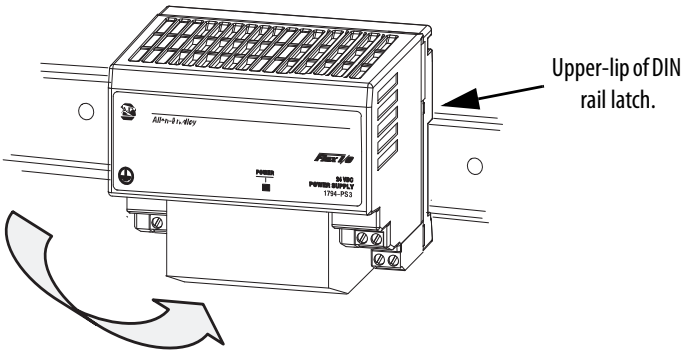
Mount and Wire the 1794-PS3 Power Supply

Use a 1794 FLEX I/O power supply to power the distributed POINT I/O modules. This publication uses the 1794-PS3 power supply.

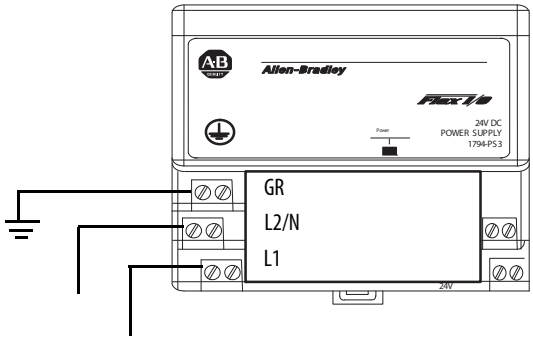
WARNING: Verify that all incoming power is turned off before wiring power.

1794-PS3 Power Supply

1. Hook the upper-lip of the DIN rail latch onto the DIN rail.
2. Press the module onto the DIN rail.



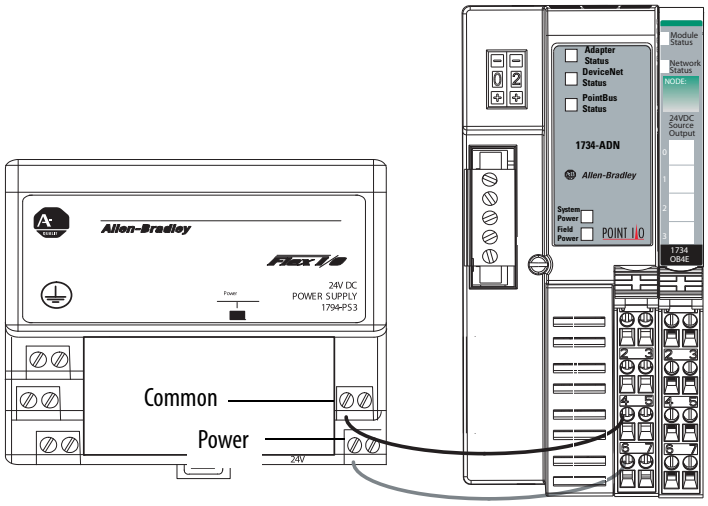
3. Connect the 120/230V AC power, 120/230V AC common, and AC Ground wires.



Wire the 1734-ADN DeviceNet Adapter to the Power Supply

1. Connect the 12/24V DC common and 12/24V DC power wires from the power supply to the adapter.

2. Turn on incoming power.



Additional Resources

For a list of additional resources that might assist you when preparing the distributed POINT I/O module hardware, see page 12.

Notes:

Create DeviceNet Network Software Files

In this chapter, you complete the following tasks:

- Register an EDS file in RSNetWorx for DeviceNet software
- Set the DeviceNet scanner module's node address
- Create a DeviceNet configuration file
- Change the POINT I/O DeviceNet network adapter's configuration
- Change the DeviceNet network configuration

IMPORTANT Multiple Logix5000 control systems can use POINT I/O modules over a DeviceNet network. For example purposes, this quick start describes the use of POINT I/O modules over a DeviceNet network in a CompactLogix 5370 L3 control system.

If you have already completed the steps in this chapter before using this quick start, skip to Chapter 3, Use the POINT I/O Adapter and Output Module in an RSLogix 5000 Project on page 47.

Before You Begin

Before you begin, you must complete these tasks:

- These tasks described in Before Using This Publication on page 5:
  - Prepare the Logix5000 control system hardware
  - Prepare the computer
  - Configure the network
  - Create an RSLogix 5000 project

- These tasks described in Chapter 1, Prepare the Distributed POINT I/O Hardware on page 13:

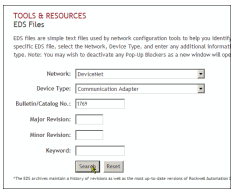
  - Mount and Connect the 1734-ADN DeviceNet Adapter
  - Mount the 1734-OB4E Digital Output Module
  - Mount and Wire the 1794-PS3 Power Supply
  - Wire the 1734-ADN DeviceNet Adapter to the Power Supply

What You Need

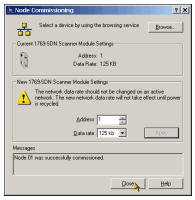
You need RSNetWorx for DeviceNet software to complete the tasks in this chapter.

Follow These Steps

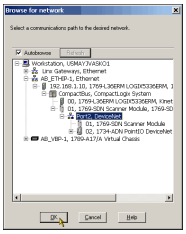
Register an EDS File - Optional page 24



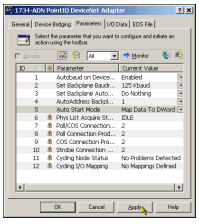
Set the 1769-SDN Scanner Module's Node Address page 27



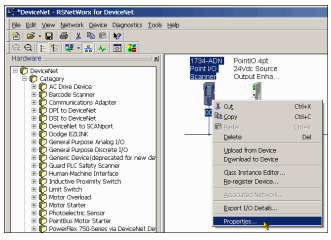
Create a DeviceNet Configuration File page 30



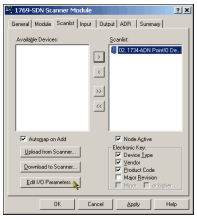
Edit the DeviceNet Adapter Parameters page 34



Configure the DeviceNet Subnet page 36



Create a DeviceNet Scanlist page 41



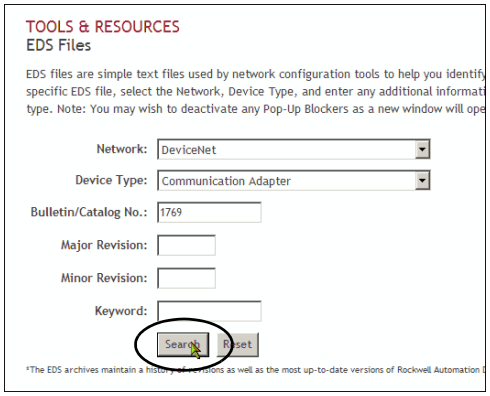
Register an EDS File - Optional

You might need to register a device for use in RSNetWorx for DeviceNet software so the software recognizes the device and uses it appropriately. You register an electronic data sheet (EDS) file in the software.

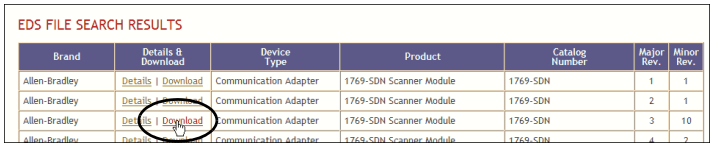
If you do not need to register an EDS file in RSNetWorx for DeviceNet software, skip to Set the 1769-SDN Scanner Module's Node Address on page 27.

1. Access the Rockwell Automation website that provides access to EDS files at: http://www.rockwellautomation.com/resources/eds/.

2. Use the pull-down menus to narrow the search parameters.

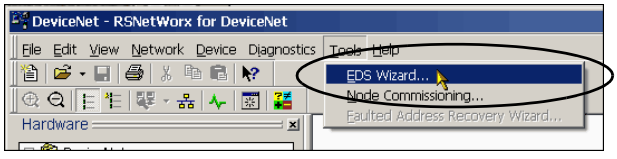


3. Click the link for the file you need to register.

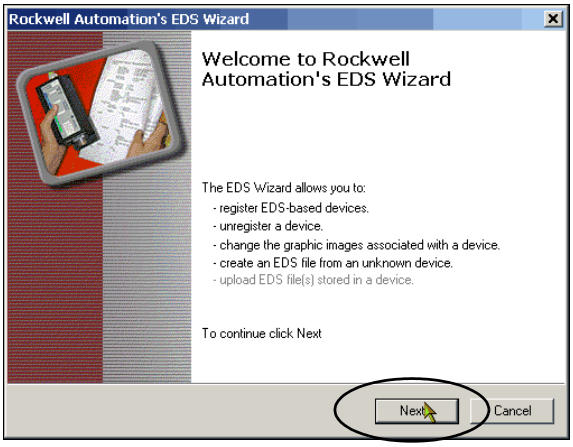


4. Save the file to a location on your computer that you will remember.

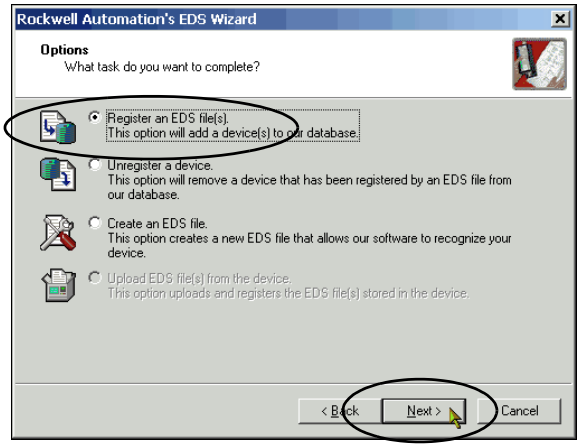
5. In RSNetWorx for DeviceNet software, choose EDS Wizard . . . from the Tools pull-down menu.



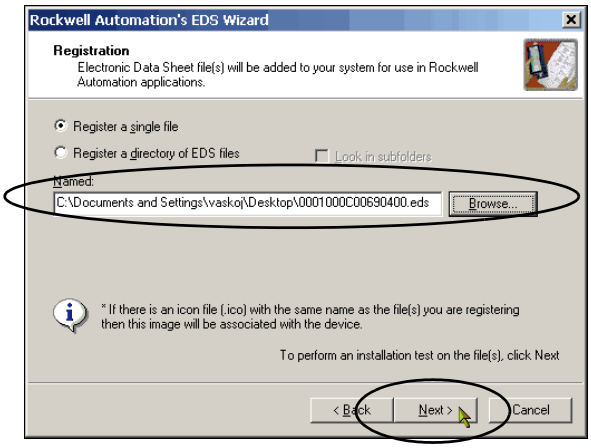
6. When the EDS dialog box appears, click Next.



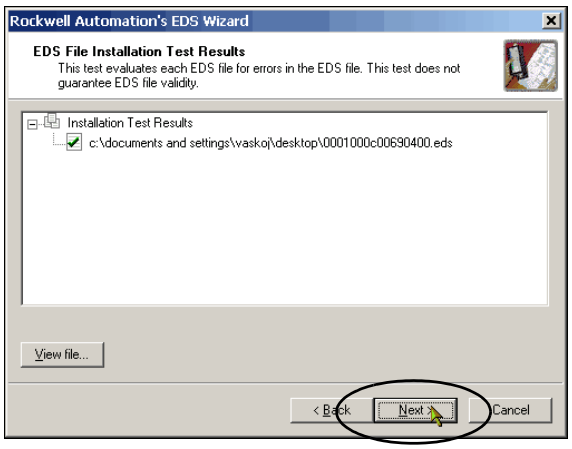
7. Verify that Register an EDS file(s). is checked and click Next.



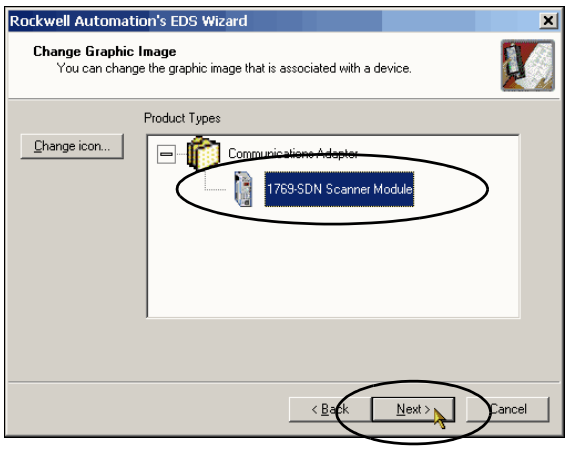
8. Browse to the EDS file and click Next.



9. When the EDS File Installation Test Results screen appears, click Next.

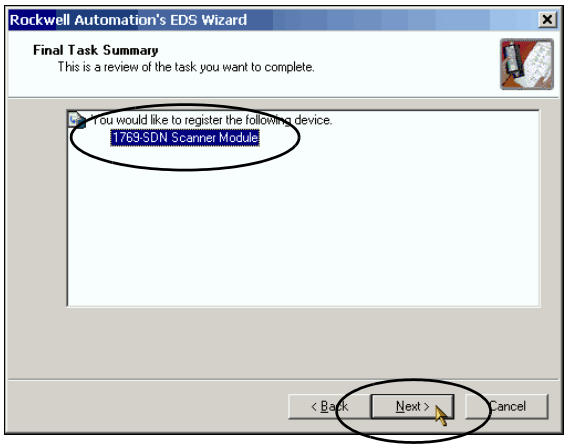


10. Select the graph image for the device you want to register and click Next.



11. Select the device you want to register and click Next.

12. Click Finish when the registration is successful.



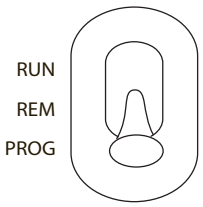
Set the 1769-SDN Scanner Module's Node Address

IMPORTANT	The tasks described in this section require the use of the Node Commissioning tool in RSNetWorx for DeviceNet software. If you are using RSLogix 5000 software, version 20 or later, as required with this quick start, the Node Commissioning tool was an optional choice during the software installation. If you did not install the Node Commissioning tool previously, do so now.

To complete the steps described in this chapter, the scanner module uses the DeviceNet network node address 1.

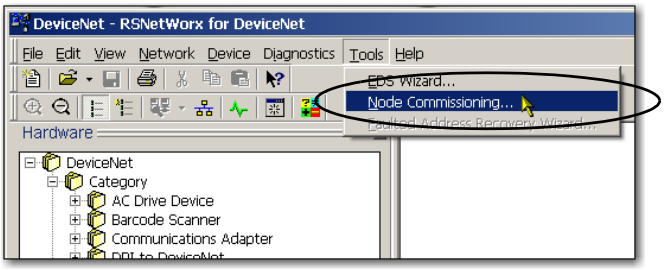
- If your scanner module's node address is already set to 1, you can skip this section and move to Create a DeviceNet Configuration File on page 30.
- If your scanner module's node address is not set to 0, use this section to learn how to change it from its current value. For example purposes, the scanner module's node number is 3 before it is changed.

1. Verify the controller's mode switch is in the PROG position.



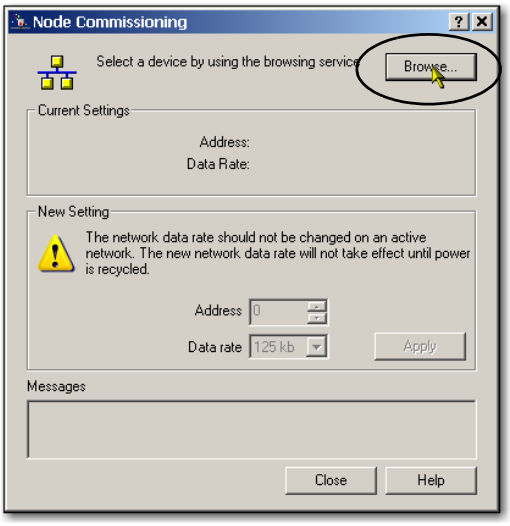
2. Start RSNetWorx for DeviceNet software.

3. From the Tools pull-down menu, choose Node Commissioning.



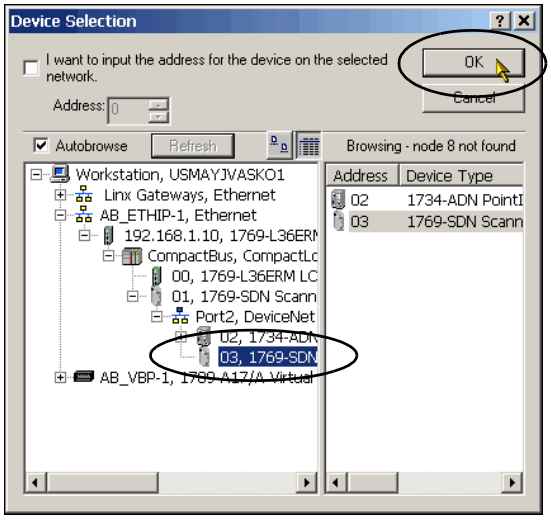
4. Click Browse.

   When the Device Selection dialog box appears, you can browse to the 1769-SDN scanner module over an EtherNet/IP network or USB connection. This example uses an EtherNet/IP network connection.



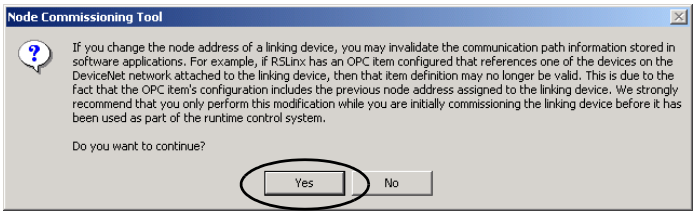
5. Under the AB_ETHIP-1 driver, expand the path to the 1769-SDN scanner module as shown in the example graphic.

6. Click OK.

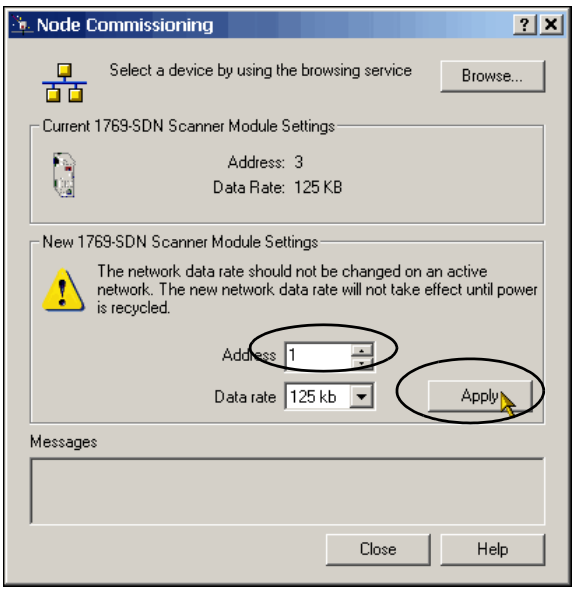


7. If you receive a linking device warning, click **Yes**.

   The Node Commissioning dialog box is populated with the 1769-SDN module's current settings.



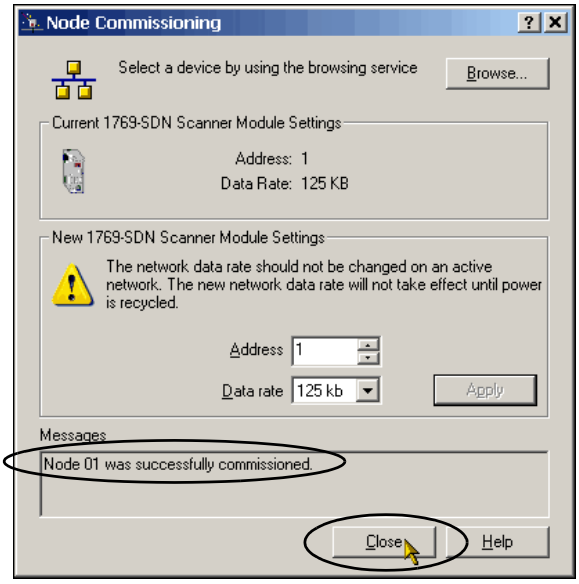
8. Enter a node address of 1 for the 1769-SDN scanner module and click Apply.



The Address is applied and is confirmed in the Messages box.

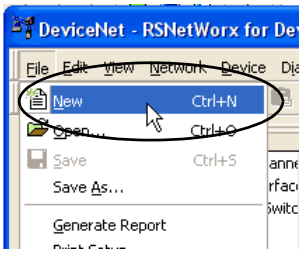
9. Record the node address.

10. Click Close.

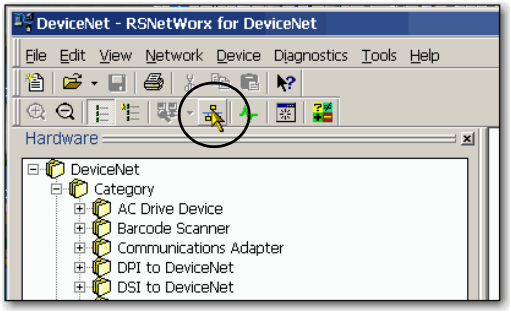


Create a DeviceNet Configuration File

1. From the File pull-down menu, choose New.

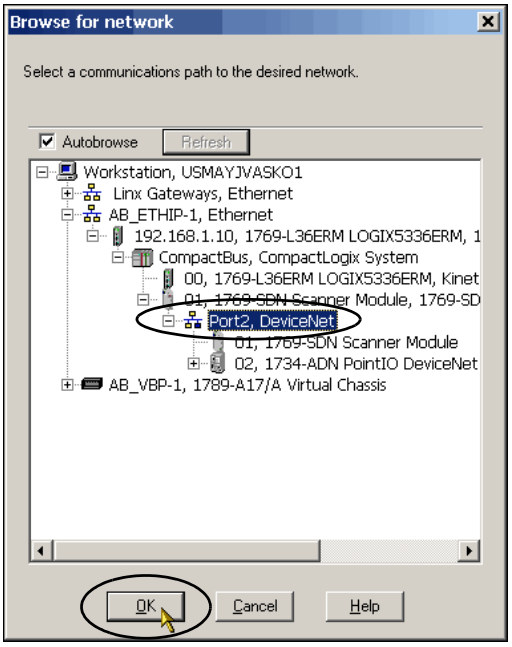


2. Click Who Active to go online.



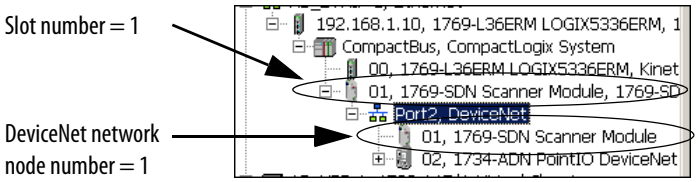
3. Expand the networks to the appropriate DeviceNet network.

   In this example, the network is Port 2, DeviceNet.



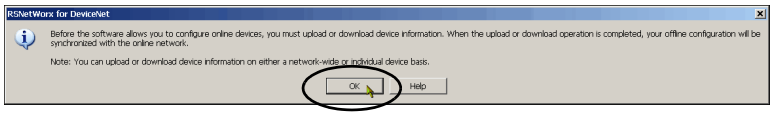
4. Record the following information about the 1769-SDN scanner module:

   - Slot number in the CompactBus = 1
   - DeviceNet network node number = 1

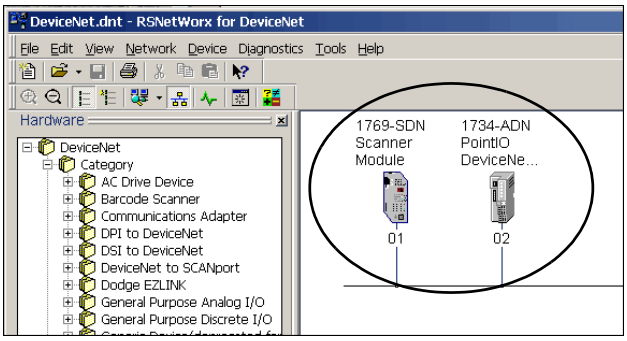


5. Click OK.

6. Click OK when the alert about uploading or downloading device information.

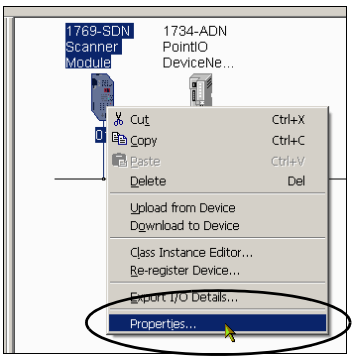


   RSNetWorx for DeviceNet software browses the network and shows the scanner module at DeviceNet network node number 1 and the 1734-ADN adapter at node number 2.

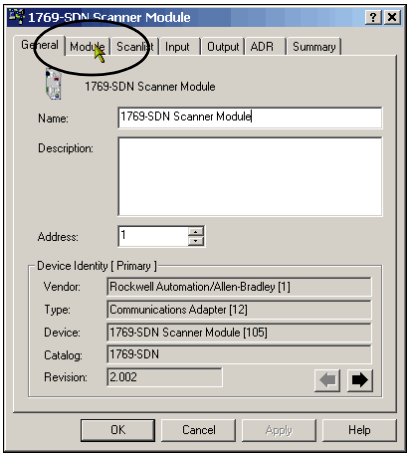


   TIP Once the software browses the DeviceNet network to recognize the two nodes installed while completing the tasks described in this quick start, you can click Cancel and the browse function ends.

7. Right-click the 1769-SDN scanner module and choose Properties.

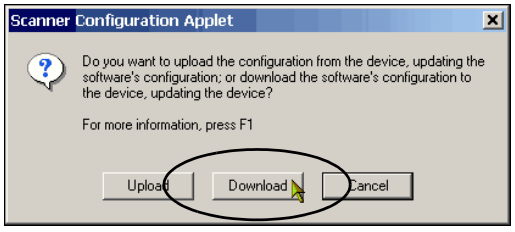


8. Click the Module tab.



9. Click Download.

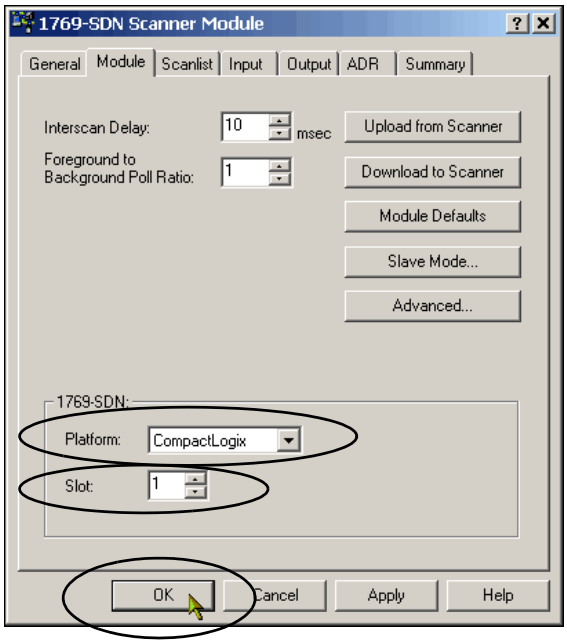
   All configuration is cleared from the 1769-SDN scanner module, and the software is synchronized with the module.



10. From the Platform pull-down menu, choose CompactLogix.

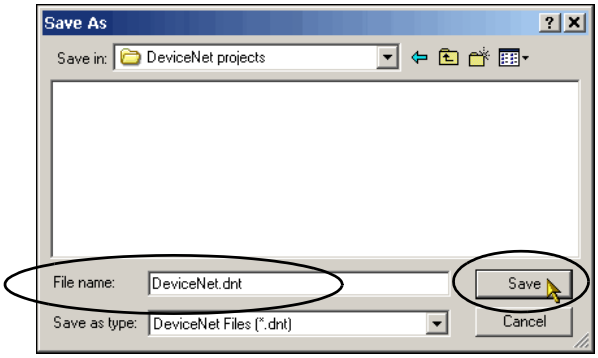
11. Enter the slot number of the 1769-SDN scanner module.

12. Click OK.



13. Save the file and record the file name and path.

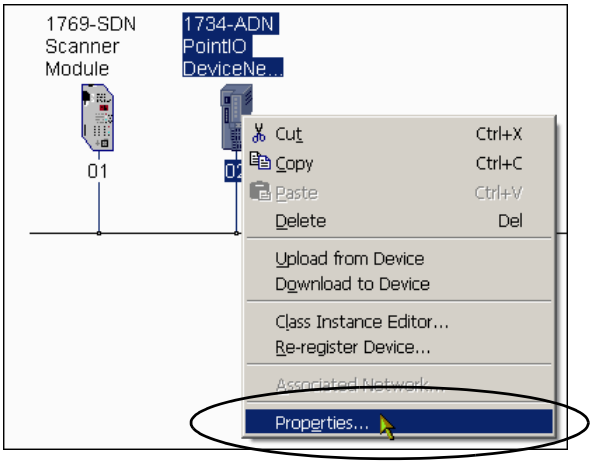
This quick start uses the example file name DeviceNet.dnt.



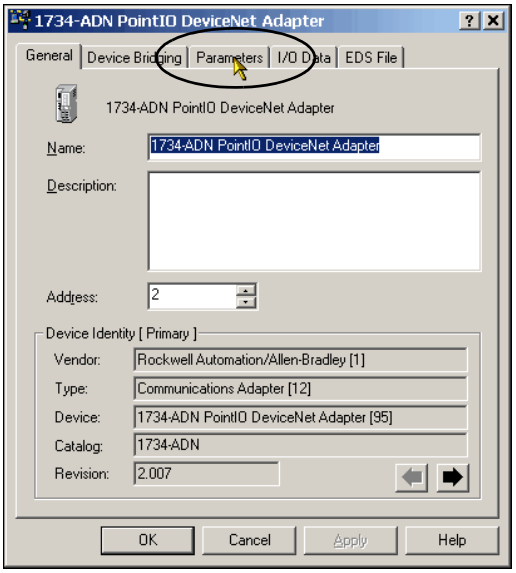
Edit the DeviceNet Adapter Parameters

Complete the following steps to edit the 1734-ADN adapter's configuration parameters.

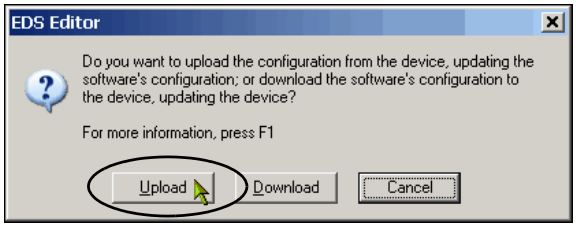
1. Right-click the adapter and choose Properties.



2. Click the Parameters tab.

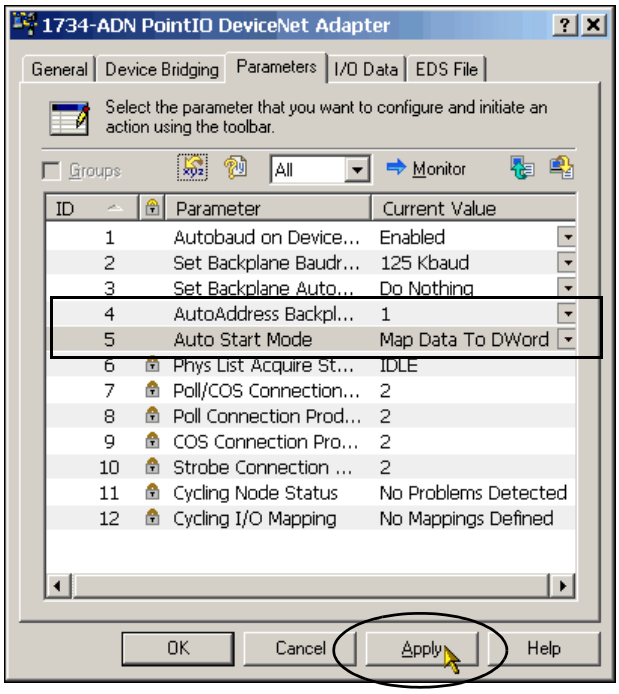


3. When prompted to upload or download configuration, click Upload.



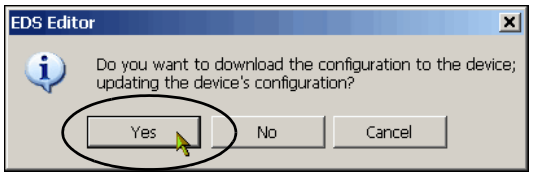
4. Change the following parameters:

   - AutoAddress Backplane Modules= **1**
   - Auto Start Mode = Map Data to DWord Boundaries.



5. Click Apply.

6. When prompted to update the adapter's configuration, click Yes.

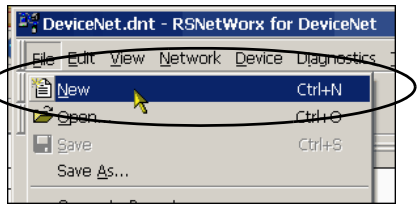


7. Click OK.

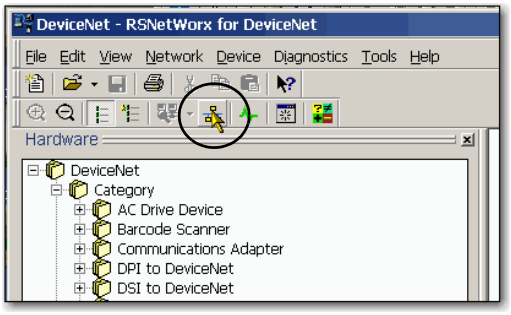
8. Save the DeviceNet configuration file.

Configure the DeviceNet Subnet

1. From the File pull-down menu, choose New.

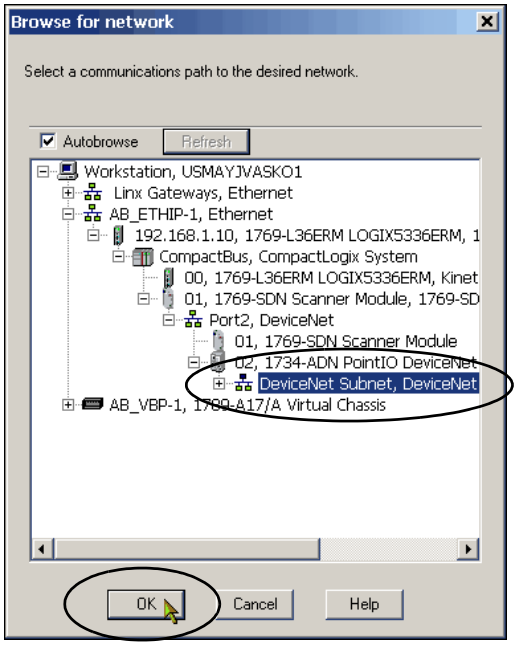


2. Click Who Active to go online.

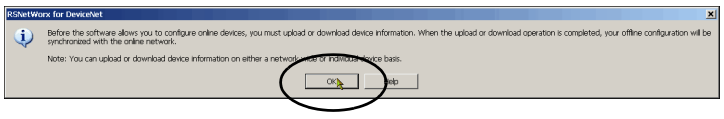


3. Expand the appropriate network and select the DeviceNet Subnet, DeviceNet network.

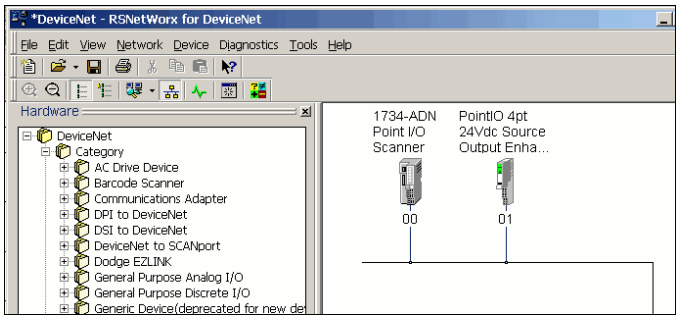
4. Click OK.



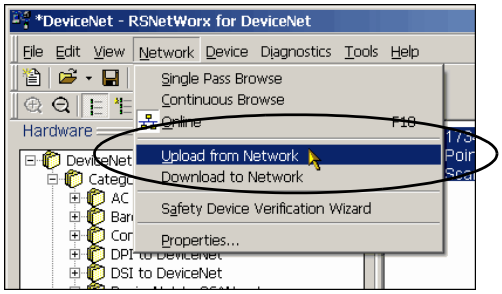
5. Click OK to upload device information.



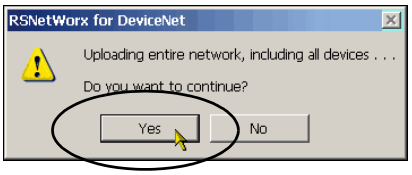
The modules on the subnet appear.



6. From the Network pull-down menu, choose Upload from Network.



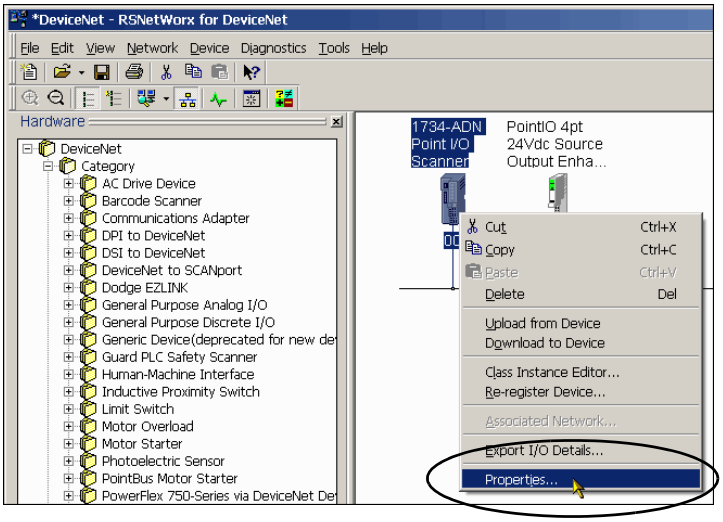
7. When prompted to upload entire network, click Yes.



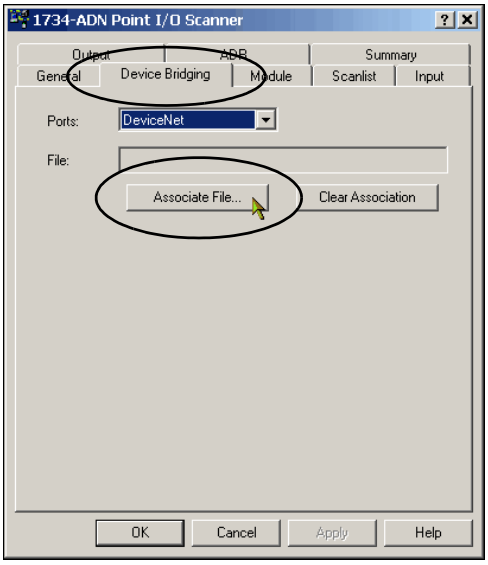
8. Right-click the 1734-ADN adapter and choose Properties.

   The remaining steps will associate a main and subnet .dnt project for the 1734-ADN module so you can easily switch between the two projects in RSNetWorx for DeviceNet software.

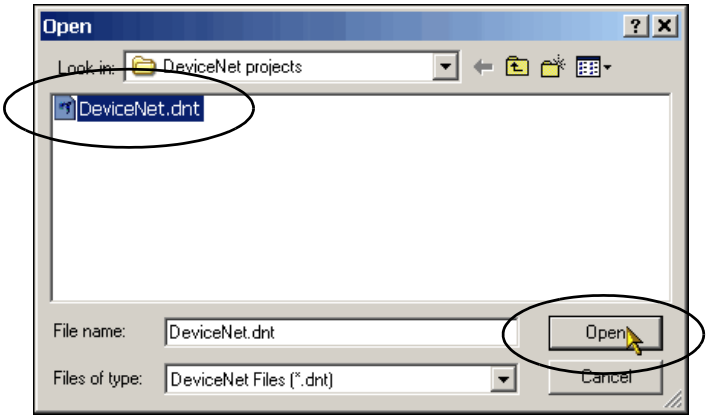
   You also need the main and subnet .dnt projects to use the DeviceNet Tag Generator utility.



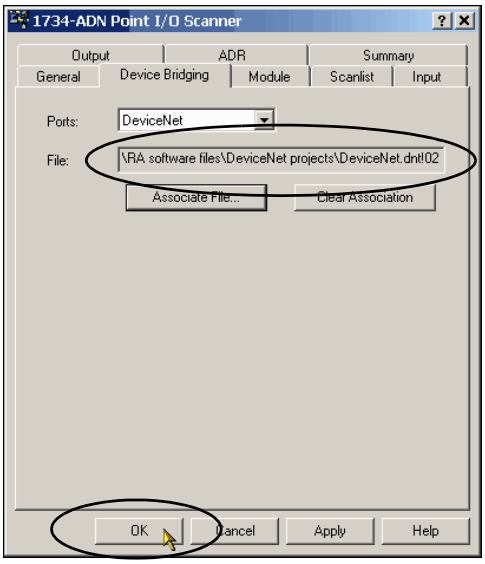
9. On the Device Bridging tab, click Associate File.



10. Select the main DeviceNet configuration file and click Open.

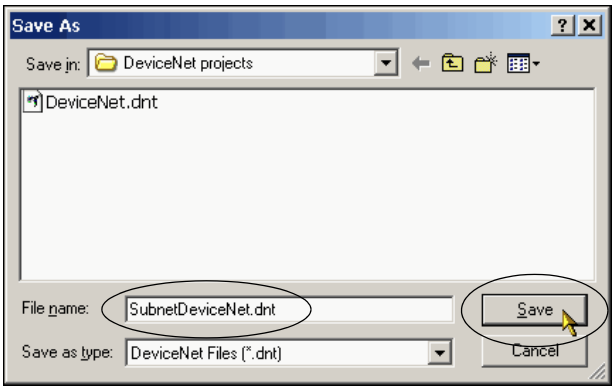


11. When the updated 1734-ADN Point I/O Scanner dialog box appears, click OK.



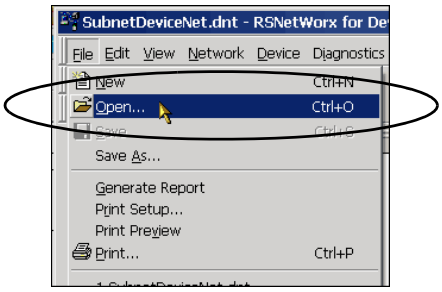
12. Save the DeviceNet subnet configuration file.

Name the file so it can be easily identified as the subnet. This quick start uses the name SubnetDeviceNet.dnt.

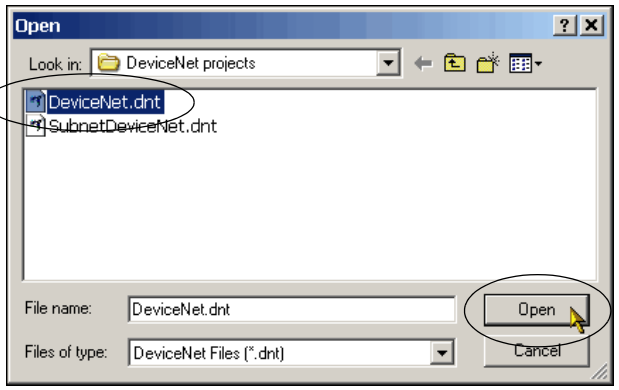


13. Record the file name.

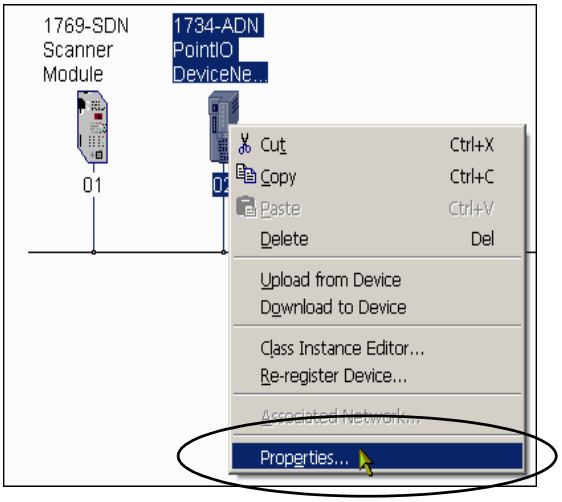
14. From the File menu, choose Open.



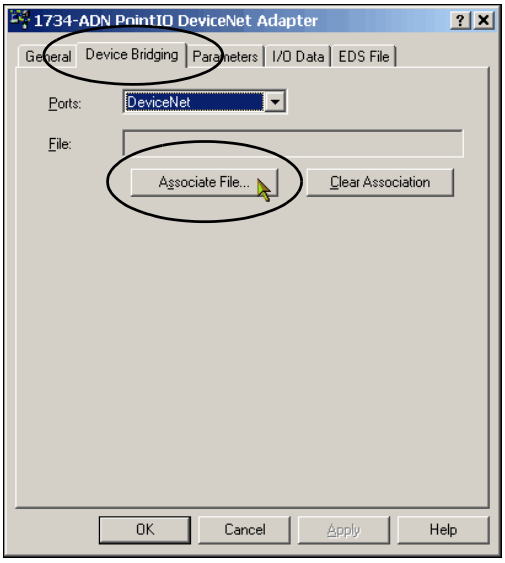
15. Select the main DeviceNet file and click Open.



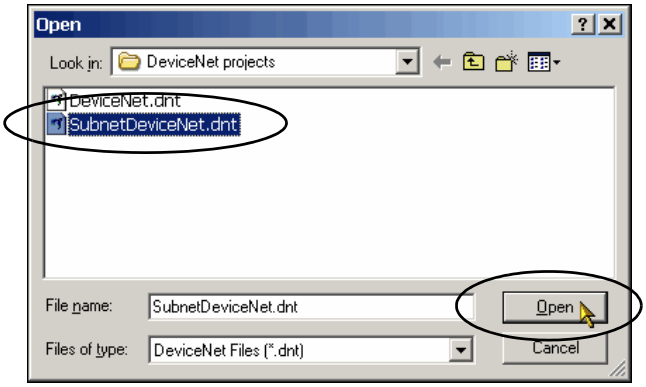
16. Right-click the 1734-ADN adapter and choose Properties.



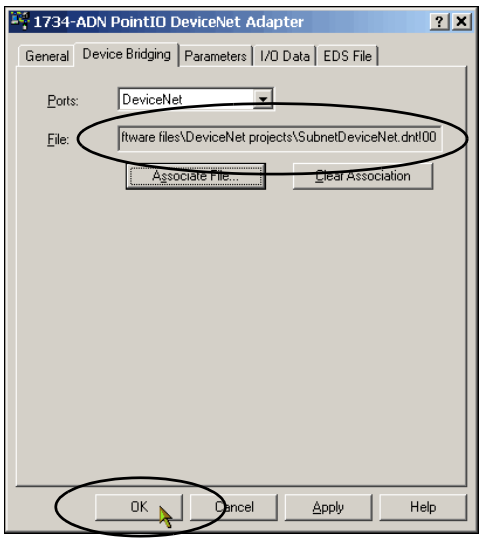
17. On the Device Bridging tab, click Associate File.



18. Select the subnet configuration file and click Open.



19. When the updated 1734-ADN Point I/O DeviceNet Adapter dialog box appears, click OK.



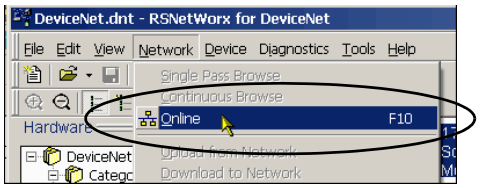
20. Click OK.

21. Save your main DeviceNet configuration file.

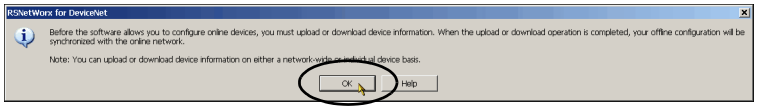
Create a DeviceNet Scanlist

1. Verify that the network is online.

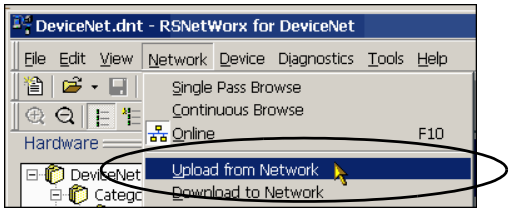
2. If the network is not online, choose Online from the Network pull-down menu.



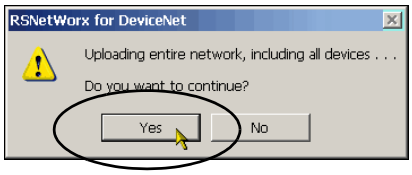
3. When alerted to uploading or downloading device information, click OK.



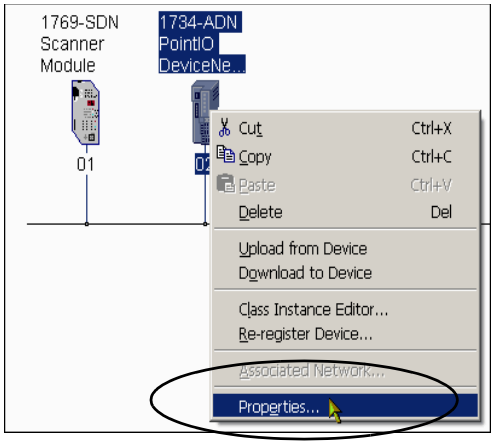
4. From the Network pull-down menu, choose Upload from Network.



5. When prompted to upload entire network, click Yes.

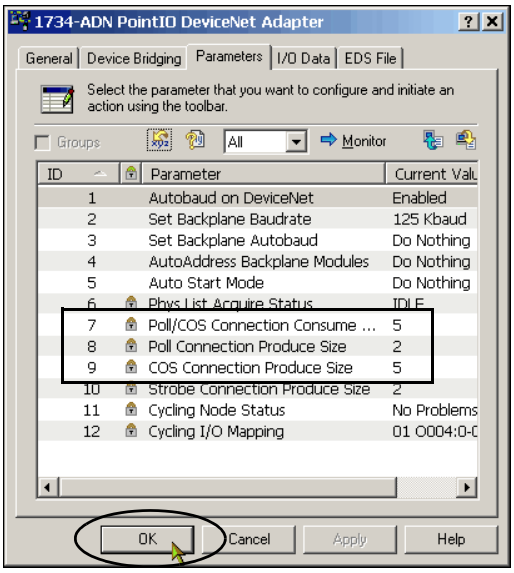


6. Right-click the 1734-ADN adapter and choose Properties.

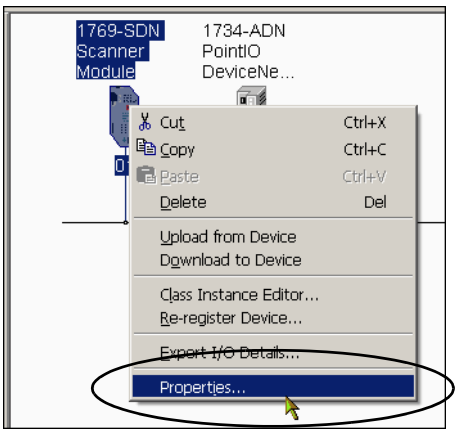


7. Click the Parameters tab and record the parameters shown.

8. Click OK.

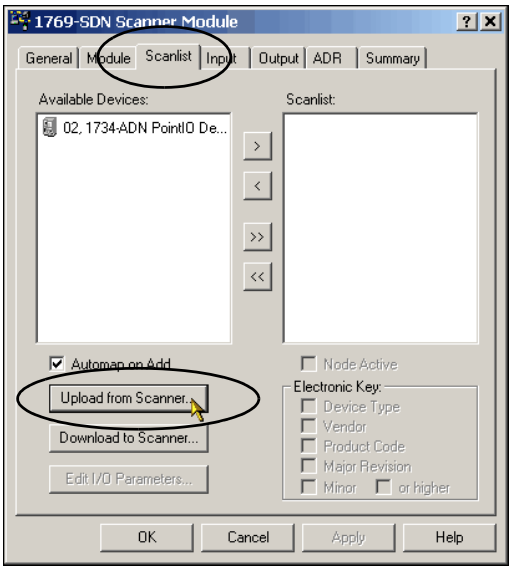


9. Right-click the 1769-SDN scanner module and choose Properties.



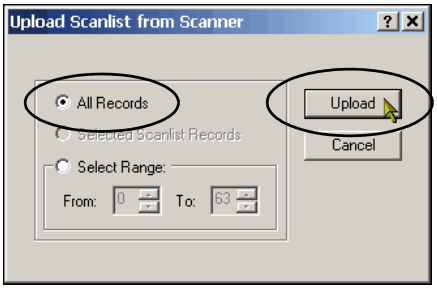
10. On the Scanlist tab, click Upload from Scanner.

The configuration is uploaded from the device.



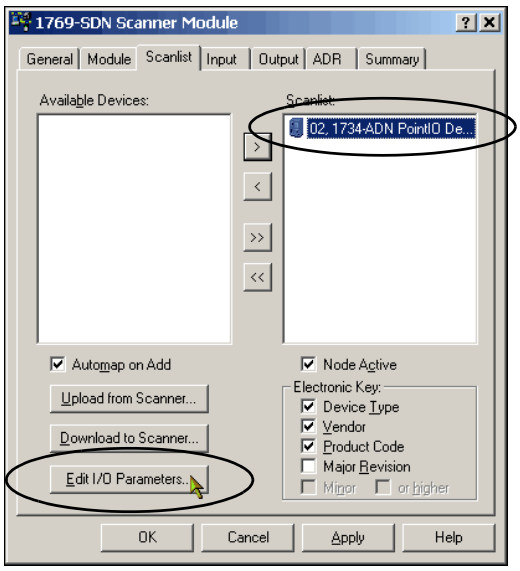
11. On the Upload Scanlist from Scanner dialog box, check All Records and click Upload

12. Click Upload.



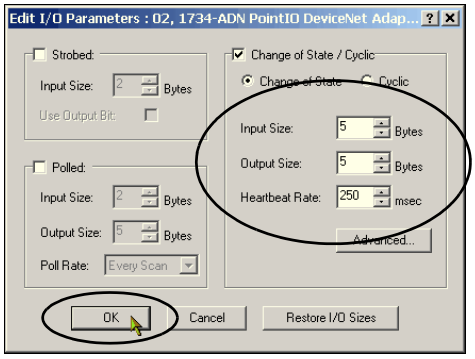
13. Select the 1734-ADN adapter and move it to the Scanlist.

14. Click Edit I/O Parameters.

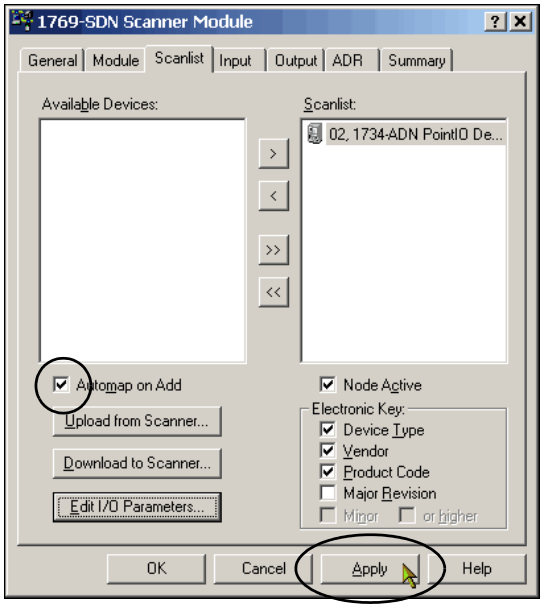


15. Verify that the I/O parameters match step 7 on page 42; if not, update them.

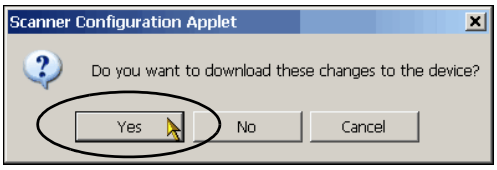
16. Click OK.



17. Verify that Automap on Add is checked and click Apply.



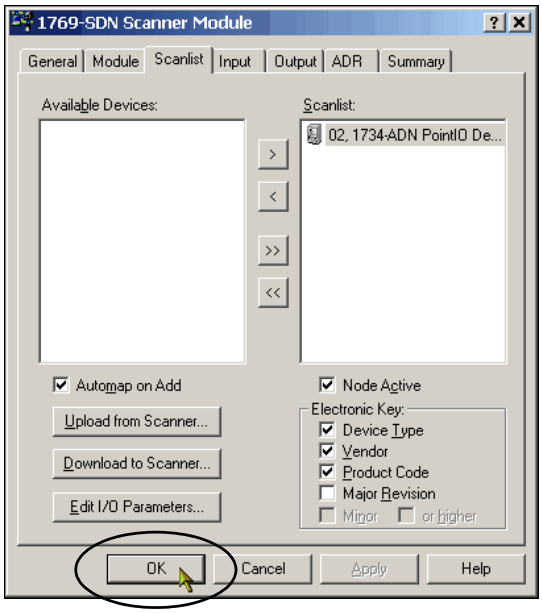
18. When prompted to download changes, click Yes.



19. Click OK to close the 1769-SDN Scanner Module dialog box.

20. Save the configuration file.

21. Close RSNetworx for DeviceNet software.



Notes:

Use the POINT I/O Adapter and Output Module in an RSLogix 5000 Project

In this chapter, you complete the following tasks:

- Create DeviceNet tags with the DeviceNet Tag Generator tool
- Add ladder logic to the RSLogix 5000 project
- Download the updated project to your controller
- Test the ladder logic on your 1734-OB4E output module

IMPORTANT Multiple Logix5000 control systems can use POINT I/O modules over a DeviceNet network. For example purposes, this quick start describes the use of POINT I/O modules over a DeviceNet network in a CompactLogix 5370 L3 control system that includes a 1769-SDN scanner module in a local expansion module slot.

This section uses an RSLogix 5000 project that matches the control system described previously and is named **POINT_IO_on_DeviceNet_quick_start.acd**. The 1769-SDN scanner module has been configured so the RSNetWorx tab links the RSLogix 5000 project to the DeviceNet file created in Create a DeviceNet Configuration File on page 30.

If you use a different Logix5000 controller and DeviceNet scanner module, you can complete the tasks in this chapter but must account for any software differences.

Before You Begin

Before you begin, you must complete these tasks:

- These tasks described in Before Using This Publication on page 5:
  - Prepare the Logix5000 control system hardware
  - Prepare the computer
  - Configure the network
  - Create an RSLogix 5000 project

- These tasks described in Chapter 1, Prepare the Distributed POINT I/O Hardware on page 13:
  - Mount and Connect the 1734-ADN DeviceNet Adapter
  - Mount the 1734-OB4E Digital Output Module
  - Mount and Wire the 1794-PS3 Power Supply
  - Wire the 1734-ADN DeviceNet Adapter to the Power Supply
- These tasks described in Chapter 2, Create DeviceNet Network Software Files on page 21:
  - Set the 1769-SDN Scanner Module's Node Address
  - Create a DeviceNet Configuration File
  - Edit the DeviceNet Adapter Parameters
  - Configure the DeviceNet Subnet
  - Create a DeviceNet Scanlist

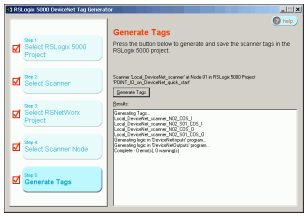
What You Need

You need the following software to complete the tasks in this chapter:

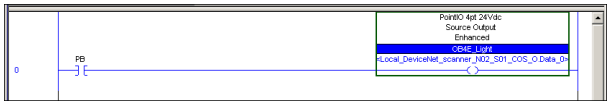
- RSLogix 5000 software
- DeviceNet Tag Generator tool in RSLogix 5000 software

Follow These Steps

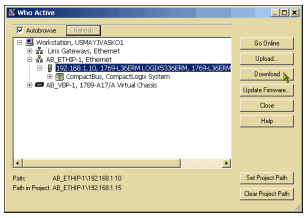
Create DeviceNet Tags page 50



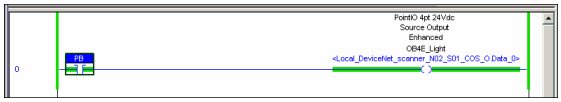
Add Ladder Logic page 53



Download the Project page 56



Test the 1734-OB4E Digital Output Module's Tags page 57



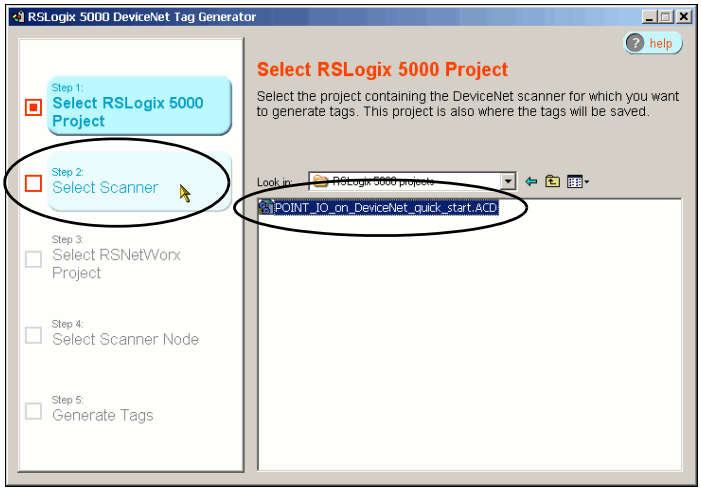
Create DeviceNet Tags

IMPORTANT Before running the DeviceNet Tag Generator, verify the following:

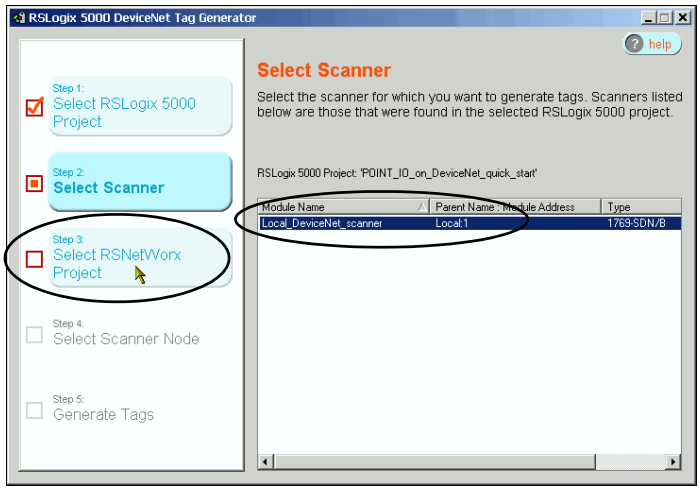
- RSLogix 5000 software is **running** and the project is open.
- RSNetWorx for DeviceNet software is **closed**.

1. Launch the DeviceNet Tag Generator.

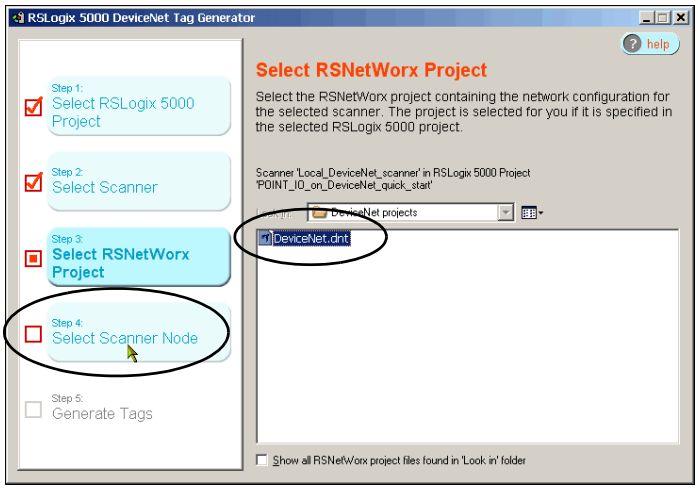
2. Select your RSLogix 5000 project and click Select Scanner.



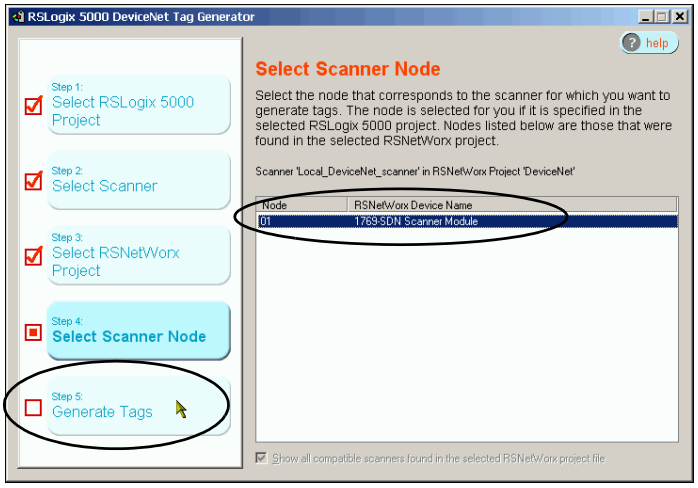
3. Select the 1769-SDN scanner module that scans the network where the device is located and click Select RSNetWorx Project.



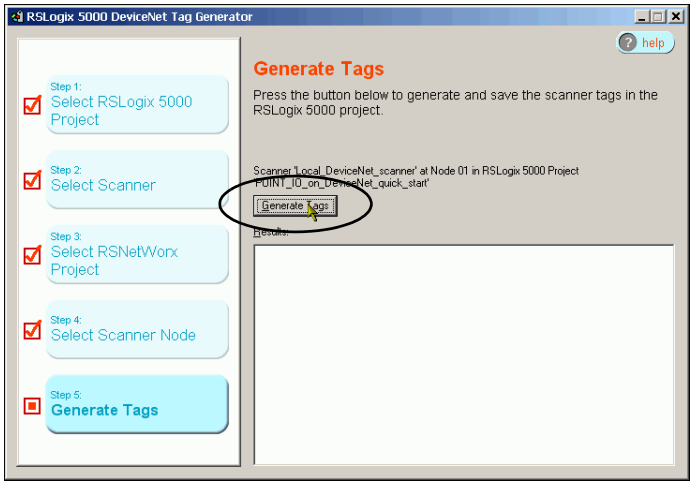
4. Select the main DeviceNet configuration file and click Select Scanner Node.



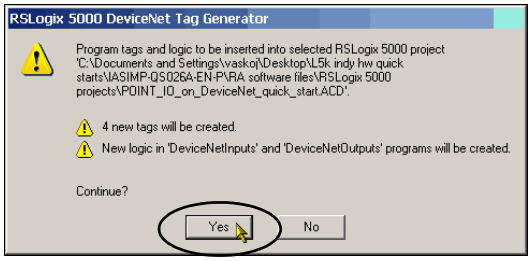
5. Select the node of the DeviceNet scanner module and click Generate Tags.



6. Click Generate Tags.

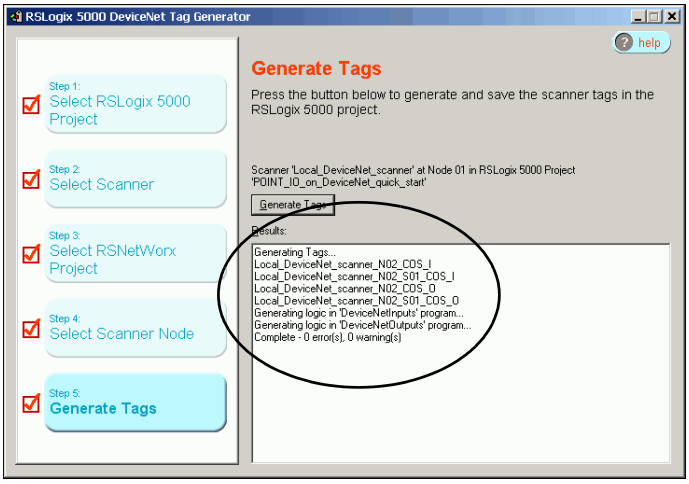


7. When prompted to continue, click Yes.

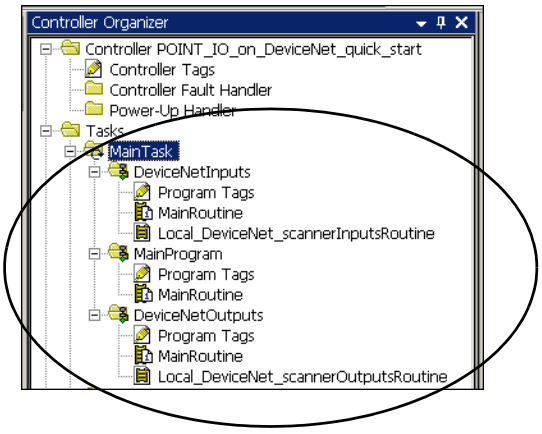


When tag generation is complete, the text log appears.

8. Close the DeviceNet Tag Generator.

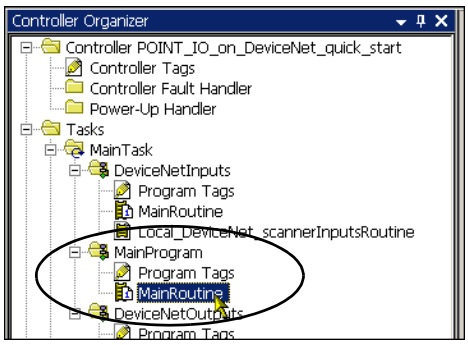


The DeviceNet Tag Generator created new programs and tags that were added to the controller organizer in your RSLogix 5000 project.



Add Ladder Logic

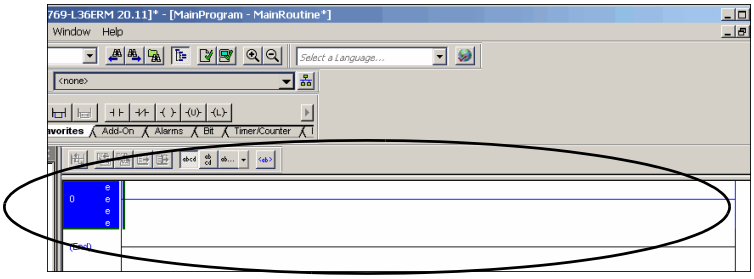
1. In RSLogix 5000 software's controller organizer, expand Tasks >MainTask>MainProgram.



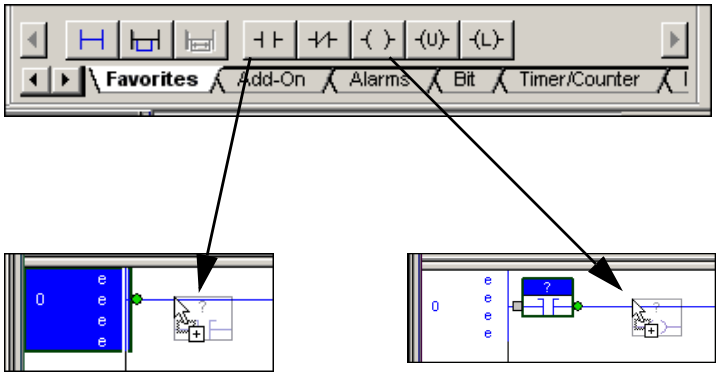
2. Double-click MainRoutine.

   A blank routine opens.

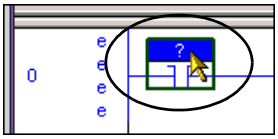
3. Add a new rung to the routine.



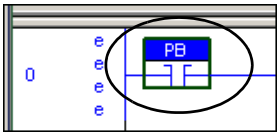
4. From the Element Toolbar, drag and drop an Examine On element and an Output Energize element onto the rung.



5. Double-click the ? in the Examine On element.

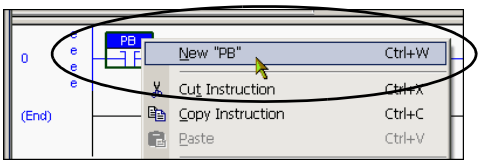


6. Type PB for push button.

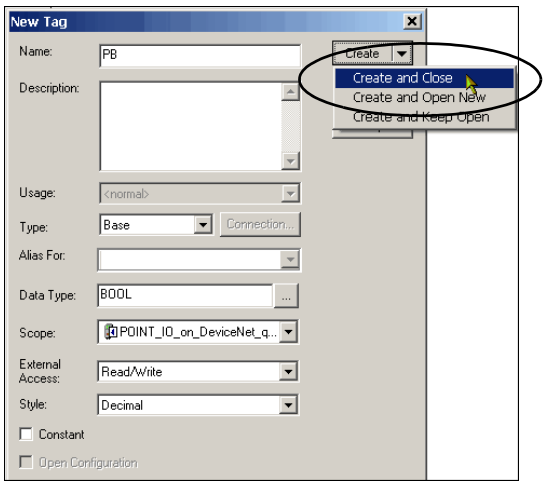


7. Press Enter.

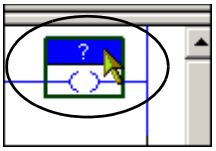
8. Right-click PB and choose New "PB".



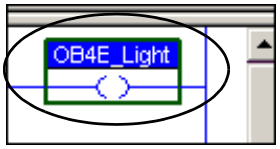
9. When the New Tag dialog box appears, click Create and Close to use the default values.



10. Double-click the ? in the Output Energize element.



11. Name the Output Energize element OB4E_Light.



IMPORTANT Do not use spaces in the tag name. Use underscores (___) instead.

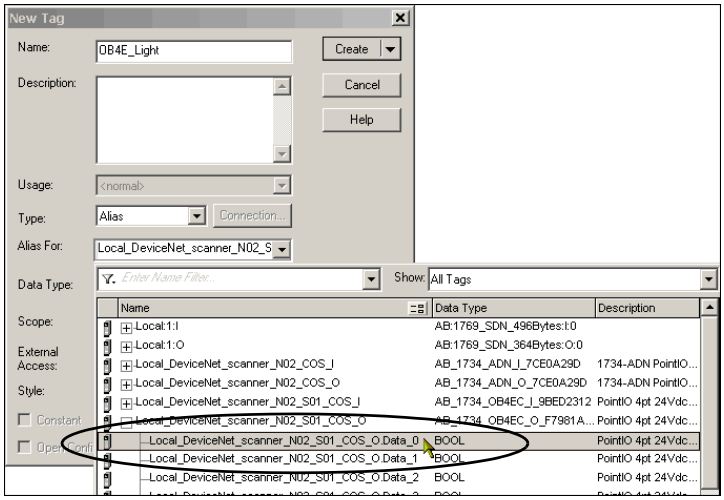
12. Right-click the OB4E_Light tag and choose New 'OB4E_Light'.

13. From the Type pull-down menu, choose Alias.

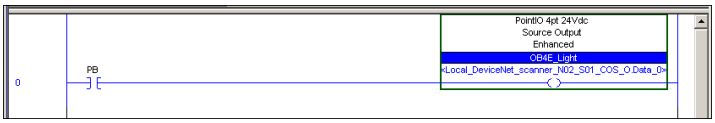
14. From the Alias For pull-down menu, browse to the 1734-OB4E digital output module and choose the bit for the light you want to turn on.

    This example uses Local_DeviceNet_scanner_N02_S01_COS_O.Data_0.

15. Click Create and Close.

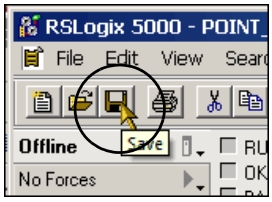


This graphic shows the rung with each element configured.

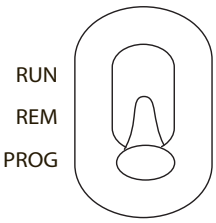


Download the Project

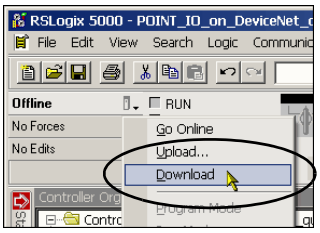
1. Save your changes.



2. Move the controller's mode switch to the PROG position.

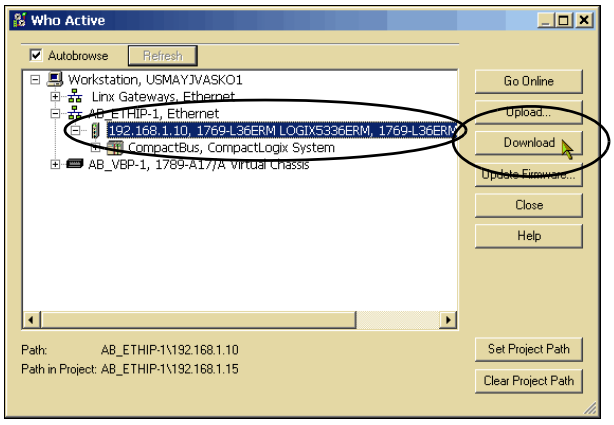


3. Click the Controller Status icon and choose Download.



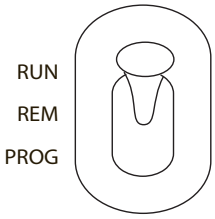
4. In the Who Active dialog box, choose your controller and click Download.

5. Click Download one more time.

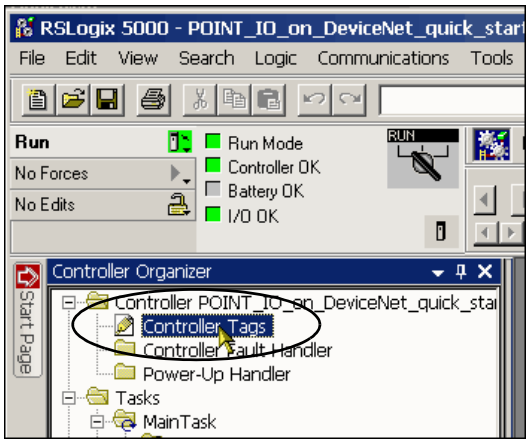


Test the 1734-OB4E Digital Output Module's Tags

1. Move the controller's mode switch to the RUN position.

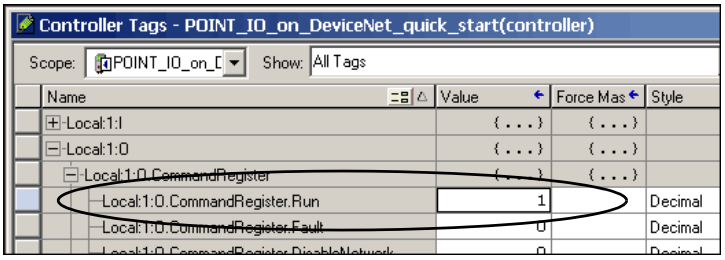


2. In the configuration tree, double-click Controller Tags.



3. Change the O.CommandRegister.Run tag to 1.

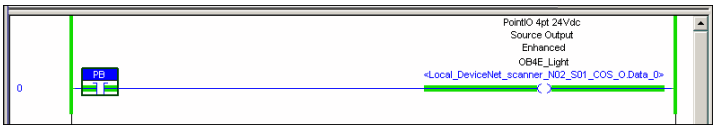
   The 1769-SDN scanner module transitions to Run mode.



4. If not open, open the project's Main Routine to find the ladder logic written earlier in this chapter.

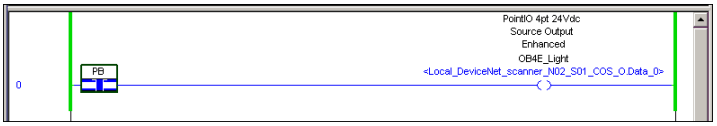
5. Select the PB and press Ctrl+T.

   This toggles the state from 0 to 1 (off to on).



6. Verify that the light on the distributed digital output module turns on.

7. Press Ctrl+T to toggle the state back to 0 (off).



8. Go Offline.

Numerics

B

C

D

E

F

H

I

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At http://www.rockwellautomation.com/support/, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration, and troubleshooting, we offer TechConnect support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit http://www.rockwellautomation.com/support/.

Installation Assistance

If you experience a problem within the first 24 hours of installation, review the information that is contained in this manual. You can contact Customer Support for initial help in getting your product up and running.

United States or Canada	1.440.646.3434
Outside United States or Canada	Use the Worldwide Locator at http://www.rockwellautomation.com/support/americas/phone_en.html, or contact your local Rockwell Automation representative.

New Product Satisfaction Return

Rockwell Automation tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned, follow these procedures.

United States	Contact your distributor. You must provide a Customer Support case number (call the phone number above to obtain one) to your distributor to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for the return procedure.

Documentation Feedback

Your comments will help us serve your documentation needs better. If you have any suggestions on how to improve this document, complete this form, publication RA-DU002, available at http://www.rockwellautomation.com/literature/.

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