

# AC 800M

EtherNet/IP DeviceNet Linking Device LD 800DN

SP1134

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**AC 800M**

**EtherNet/IP DeviceNet Linking Device LD 800DN**

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This product meets the requirements specified in EMC Directive 89/336/EEC and in Low Voltage Directive 72/23/EEC.

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# TABLE OF CONTENTS

## Section 1 - Installation

Introduction .....	9
Installation Items Checklist .....	9
Installation and Operation Requirements .....	9
Connectors .....	10
Connect Power .....	11
Connecting to DeviceNet .....	12
DeviceNet Connector .....	12
Setting the MAC ID Using the BWConfig Tool .....	12
Connecting to Ethernet .....	14
Ethernet Connector .....	14
Setting the IP Address .....	15
Configuration Port Connector .....	19

## Section 2 - Technical Specifications

Environmental Specifications .....	21
EMC Directive Compliance .....	21
Electrical Specifications .....	21
Further Technical Information .....	22



# Safety Summary



## **Electrostatic Sensitive Device**

Devices labeled with this symbol require special handling precautions as described in the installation section.

## **GENERAL WARNINGS**

### **Equipment Environment**

All components, whether in transportation, operation or storage, must be in a noncorrosive environment.

### **Electrical Shock Hazard During Maintenance**

Disconnect power or take precautions to insure that contact with energized parts is avoided when servicing.

## **SPECIFIC WARNINGS**

Page 10: Substitution of components may impair suitability for Class 1, Division 2.

## **SPECIFIC CAUTIONS**

Page 10: When in hazardous locations turn off power before replacing or wiring modules.

Page 10: Do not disconnect equipment unless power has been switched off or the area is known to be nonhazardous.





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# Section 1 Installation

## Introduction

This section describes the installation requirements for DeviceNet Linking Device LD 800DN and the installation procedure.

## Installation Items Checklist

- EtherNet to DeviceNet Linking Device LD 800DN.
- EtherNet/IP DeviceNet Configuration manual (9ARD000014\*).
- Power cable for connection to supplied 2 position connector.
- DeviceNet cable for connection to supplied 5 position connector.
- Ethernet cable for connection to RJ45 connector.

## Installation and Operation Requirements

Power, input and output (I/O) wiring must be in accordance with Class 1, Division 2 wiring methods article 501-4 (b) of the National Electric code, NFPA 70 and in accordance with local codes.

- Terminal tightening torque must be between 5 lbs-in to 7 lbs-in (0,5 Nm - 0,8 Nm).

- For use in Class 2 circuits only.
- Suitable for Surrounding temperature of 65°C max.
- Use 60/75 C copper wire only.



Substitution of components may impair suitability for Class 1, Division 2.



When in hazardous locations turn off power before replacing or wiring modules.



Do not disconnect equipment unless power has been switched off or the area is known to be nonhazardous.

## Connectors

The following [Figure 1](#) displays the connectors for LD 800DN.

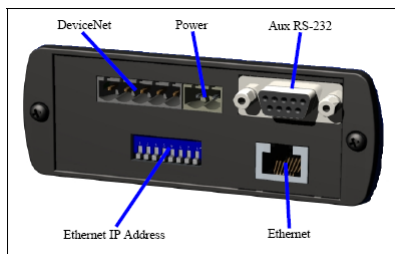


Figure 1. Connectors for LD 800DN

## Connect Power

The LD 800DN requires 24 V DC power for the 2 position terminal block connector.

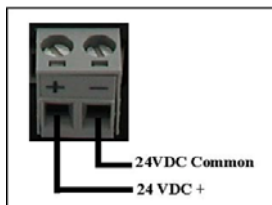
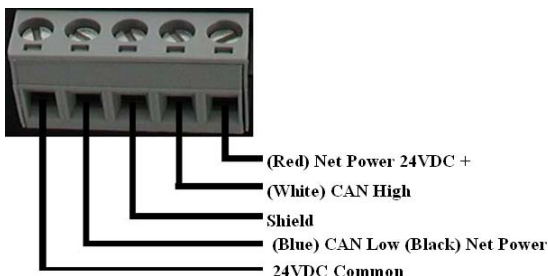


Figure 2. 24 volts DC power

## Connecting to DeviceNet

### DeviceNet Connector

DeviceNet is connected to the 5 position terminal block connector.



*Figure 3. DeviceNet Connector*

A 120 ohm termination resistor (Two pieces included with the product) needs to be placed at the beginning and at the end of the Controller-Area Network (CAN). The termination resistor is placed between CAN High and CAN Low signals.

### Setting the MAC ID Using the BWConfig Tool

The factory default DeviceNet settings are: MAC ID 63.

The following are the steps for setting the MAC ID using BWConfig Tool:

1. Launch the BWConfig tool, a window is displayed as shown in [Figure 4](#).
2. Edit the MAC Address provided in the DeviceNet Configuration pane and download the configuration to LD 800DN.

After the configuration is downloaded, the BWConfig tool will automatically reset the LD 800DN. For complete information on using BWConfig tool, refer to LD 800DN section of *EtherNet/IP DeviceNet Configuration manual (9ARD000014\*)*.

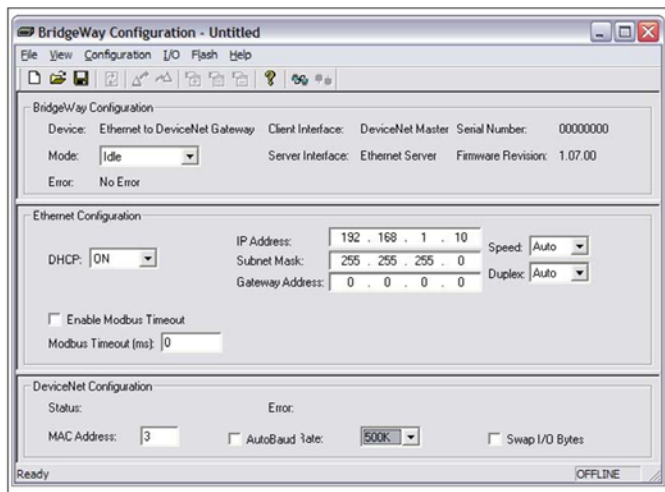


Figure 4. BWConfig tool

## Connecting to Ethernet

### Ethernet Connector

The Ethernet cable is connected to the RJ45 connector at the end of the module.

## Setting the IP Address

The following are the various ways of setting ip address for LD 800DN:

- [Setting the IP Address Using the BWConfig Tool.](#)
- [Setting the IP Address with the Configuration Switch.](#)
- [Setting the IP Address Using the Web Page.](#)

### Setting the IP Address Using the BWConfig Tool

The Ethernet configuration can be set using the BWConfig tool.

The following are the steps for setting the IP Address using BWConfig Tool:

1. Launch the BWConfig tool, a window is displayed as shown in [Figure 4](#).
2. Edit the IP Address in the Ethernet configuration pane and download the configuration to LD 800DN.

After the configuration is downloaded, the BWConfig tool will automatically reset the LD 800DN. For complete information on using BWConfig Tool, refer to LD 800DN section of *EtherNet/IP DeviceNet Configuration manual (9ARD000014\*)*.

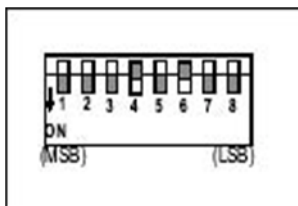
## Setting the IP Address with the Configuration Switch

The IP configuration switch is an 8 position DIP switch located at the end of the module. If any of the 8 switches are in ON position, then the following IP address is set.

*Table 1. IP addresses*

IP Address:	192.168.1.n
Subnet Mask:	255.255.255.0
Gateway Address:	0.0.0.0
Where n is the value represented in binary by the DIP switch. This address is a private address and can only be used on a local intranet.	

Example:



*Figure 5. Switch with Binary Value*



The switch represents the binary value 00010100, or 20 decimal. (The switch position is shown in White in the diagram.) The resulting IP address is 192.168.1.20.



This procedure of setting IP address using the Configuration Switch takes precedence over all the other procedures.

### **Setting the IP Address Using the Web Page**

The IP address can also be configured using the Status and Settings web page. The web pages are accessed by typing the current IP address of the LD 800DN into a web browser URL. The Status and Settings web page appears as shown in [Figure 6](#).

Status & Settings	
Product Name	LD 800DN
Vendor ID	1063
Product Type	12
Product Code	731
Product Revision	1.02.01
Anybus Revision	2.01
Serial Number	0xAN0C3F14
DeviceNet MAC ID	2
DeviceNet Baud Rate	125K
DeviceNet Autobaud Enabled	NO
DeviceNet Network Status	ONLINE
DeviceNet Scanner Mode	RUNNING
IP Address	10.140.201.36
Subnet Mask	255.255.255.0
Gateway IP Address	10.140.201.1
Mail Server IP Address	
DHCP enabled	<input type="checkbox"/>

Submit Values

Figure 6. Status and Settings Webpage

The IP address, subnet mask, and default gateway address are displayed in the text boxes on the web page. Edit the IP address values accordingly. Select **Submit Values** to set the addresses for LD 800DN.



A power cycle or module reset is required for the changes to take effect after selecting the **Submit Values** button.

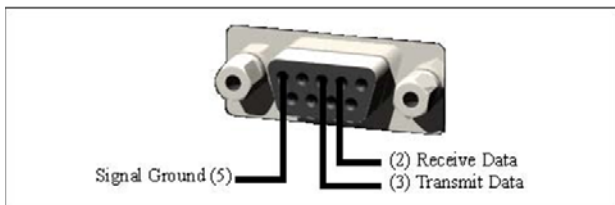
The Reset Module button can be used to reset the LD 800DN from the web browser. The Scanner Mode will display **RESETTING...** while the module resets and comes back online. The web page is refreshed after the module has booted.



If the web browser is configured to cache web pages, it may appear that the LD 800DN has not changed address after the module is power cycled. Ensure that the browsers settings are configured to always reload pages. This can be done on **Internet Explorer** in the **Temporary Internet Files Settings** by selecting the **Every Visit to the page** option. This option enables the browser to check for any changes on the page.

## Configuration Port Connector

The configuration port is the 9-pin D-Subminiature female connector at the end of the LD 800DN. [Figure 7](#) shows the connections to be made.



*Figure 7. Configuration Port Connector*

The LD 800DN is connected to a PC for configuration using a null-modem cable. A null-modem cable has pin 2 and pin 3

swapped so that Transmit line of the PC is connected to the LD 800DN Receive line, and Receive line of the PC is connected to the LD 800DN Transmit line.



The LD 800DN does not use the modem control signals specified for a DTE connector. Connecting the module through devices, such as isolation modules, which assume control of these lines may result in unreliable BWConfig communication.

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## Section 2 Technical Specifications

### Environmental Specifications

Operating Temperature: 0° C to 65° C.

Non-Operating Temperature: -25° C to 85° C.

### EMC Directive Compliance

This product is tested to meet the Council Directive 2004/108/EC Electromagnetic Compatibility (EMC) by applying the following standards, in whole or in part, documented in a technical construction file:

- EN61000-6-4-EMC Generic Emission Standard for Industrial Environment.
- EN61000-6-2-EMC Generic Immunity Standard for Industrial Environment.

This product is intended for use in an industrial environment.

### Electrical Specifications

Power Supply: 12 VDC - 30 VDC.

Current Requirements: 130 mA - 140 mA at 24 VDC.

## **Further Technical Information**

For further technical information on LD 800DN, refer to  
*EtherNet/IP DeviceNet Configuration manual (9ARD000014\*)*.



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